

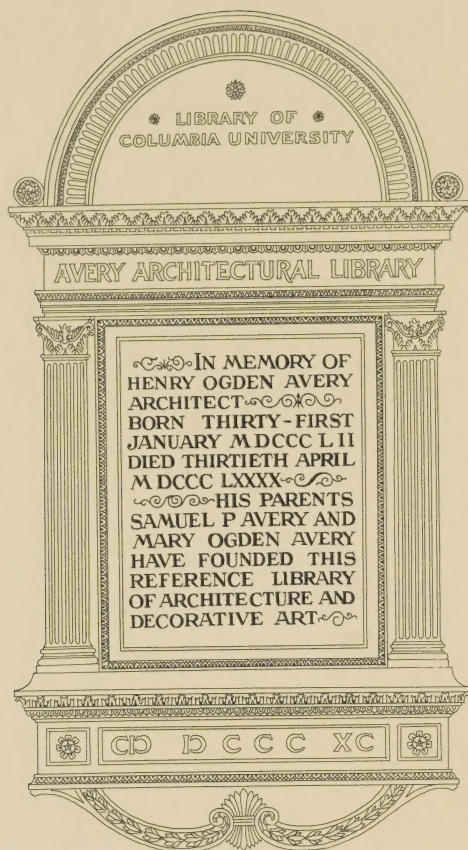
ARCHITECTURAL SHEET METAL WORK

THE LUPTON WINDOW



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This book illustrates and describes

The Lupton Fire-proof Window
Hollow sheet-metal construction
Glazed with wired glass



The Lupton Architectural and Ornamental
Sheet-metal Work in general



The Lupton Skylights and Skylight Gearing



The Lupton Eaves-trough and Conductor-pipe,
with fixtures and trimmings



The Lupton Builders' Light Iron-work



David Lupton's Sons Company

Established 1871

General Offices and Works:

Philadelphia

New York: 220 Broadway

Detroit: 1315 Third Avenue



The Lupton Works occupy a full city-block, at Allegheny Avenue and Tulip Street, Philadelphia
Ground area 323,400 square feet

The plant that delivers the goods

The factory behind THE LUPTON WINDOW is the largest architectural sheet-metal works in America.

It is equipped with larger, heavier and more powerful sheet-metal-working machines and tools,—and with more of them,—than any other plant of the kind.

The Lupton facilities are absolutely complete—from draughting department and modeling rooms to railroad sidings; as may be seen from the photogravures throughout this book: Including even such auxiliaries as an independent gas-generating plant for supplying the numerous forges.

Moreover, the Lupton shops are built to provide workers with abundant daylight and fresh air.

An equipment and surroundings conducive to highest-class workmanship.

Back of it all is the invaluable cumulative experience of two generations of experts in architectural sheet-metal work.

This, in a nutshell, is the reason for Lupton window superiority; the reason why Lupton architectural sheet-metal work is *standard*.

David Lupton's Sons Company

New York

Philadelphia

Detroit



THE LUPTON WINDOW received the highest award of the Louisiana Purchase Exposition in 1904.

From a special report on the Baltimore fire,
by the National Fire Protection
Association:

“Buildings of fire-resistive construction but having numerous unprotected windows do not serve positively in retarding the spread of a conflagration.

“The general absence of protection at exposed wall openings is responsible for the spread of the Baltimore fire * * * is the cause for the spread of this fire beyond control.

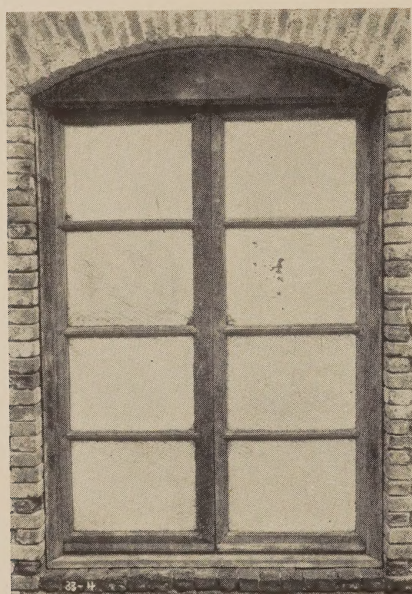
“This conflagration has again demonstrated that, where subjected to exposing fire, the most vulnerable parts, in buildings of fire-resistive construction, are the window and wall openings. The necessity for making all these openings as nearly *equal in fire-resistive properties* to the other features of the building, as is possible, will be apparent.”

The necessity for *universal* window protection,—as emphasized at Baltimore, then at Rochester, again at Toronto, and still again in the San Francisco disaster, is most successfully met with

The Lupton Fire-proof Window

The Lupton Fire-proof Window

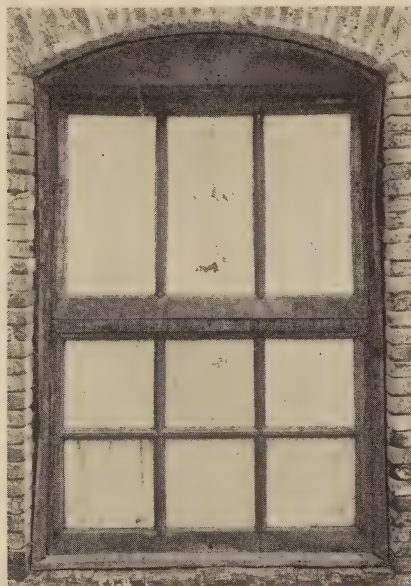
is regularly tested, in its various forms, by the Underwriters' Laboratories, Inc., and is *approved for use* by the National Board of Fire Underwriters and the National Fire Protection Association.



THE LUPTON WINDOW. Type J—*Casement*
After an hour's fire-test at 1455°

The windows here shown were subjected to direct flames at 1455° Fah., and 1475° Fah., respectively, for one hour. Moreover, a seven-eighths stream of cold water, sixty pounds pressure at nozzle, was turned on the glowing windows when withdrawn from the combustion chamber.

The severity of the Underwriters' tests will be better appreciated by considering that the maximum temperature in the fire, during the Baltimore conflagration, was approximately three hundred degrees *lower* than the temperatures here quoted.



THE LUPTON WINDOW. Type G

After an hour's test at 1475°

By authority of the Underwriters' Laboratories, Inc.,
Lupton windows carry these labels:

Window Frame
For Wired Glass
Constructed under the supervision of
Underwriters' Laboratories, Inc.

Lupton A 06
Manufactured by
David Lupton's Sons Company
Philadelphia



Acting through its Committee on Science and the Arts,

OF EDWARD LONGSTRETH MEDAL OF MERIT

To **David Lupton's Sons Co.**

For their Automatic Metallic fire-Proof Window.

in accordance with the Committee's Report, Numbered 2314, and dated May 4th 1904.

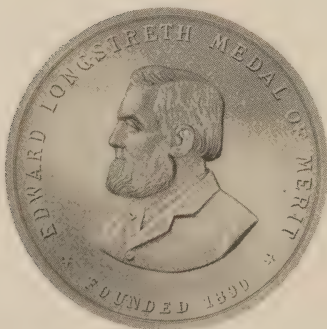


James M. Stewart
OFFICIAL OF BOARD 1875-1876, 1878-1879 AND 1880-1881

Wm. B. Frank

Wm. B. Frank

The Franklin Institute's awards are based on investigations conducted by experts of unquestioned authority. Therefore, more than usual importance is attached to the possession of the Longstreth Medal, awarded by the Franklin Institute.



The Lupton Fire-proof Window

Hollow sheet metal Glazed with wired glass

Standard Types

- TYPE *A* —Double hung, non-reversible sashes
TYPE *B* —Double hung, *reversible* sashes
TYPE *C* —Self-balanced sashes—one hung on the other
TYPE *F* —Stationary sash
TYPE *G* —Stationary lower, pivoted upper sash
TYPE *H* —Pivoted lower, stationary upper sash
TYPE *I* —Pivoted upper and pivoted lower sashes
TYPE *J* —Casement sashes hinged to swing in
TYPE *J*₂ —Casement sashes hinged to swing out
TYPE *K* —Hinged at side to open in
TYPE *K*₂ —Hinged at side to open out
TYPE *K*₃ —Hinged at sill to open in
TYPE *K*₄ —Hinged at head to open in
TYPE *K*₅ —Hinged at head to open out
TYPE *L* —Single pivoted sash
TYPE *M* —Single vertically pivoted sash

The principles of construction of THE LUPTON WINDOW are applicable to any window anywhere in any building; exterior or partition walls.

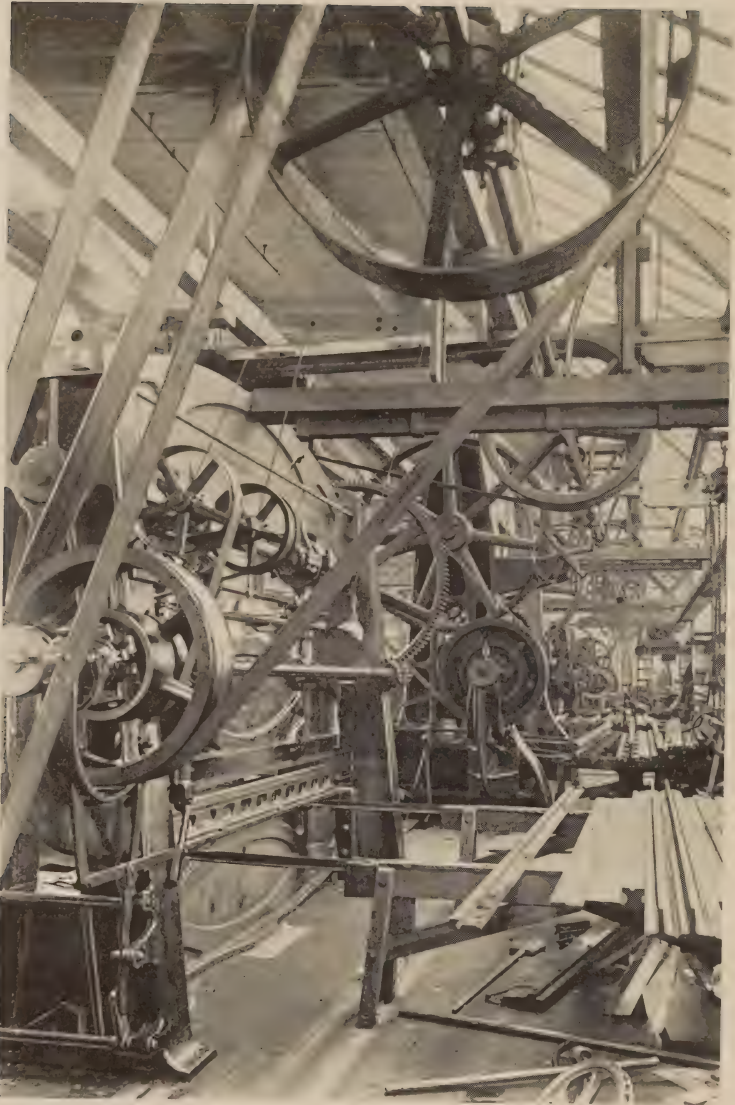
Patented and manufactured by

David Lupton's Sons Company

New York

Philadelphia

Detroit



The Lupton Works has twice as many sheet-metal forming presses as the next largest plant; and larger, heavier presses than any other plant.

Extra-weight metal in frames

Heavier metal is used in THE LUPTON WINDOW than is generally employed in the making of sheet-metal windows. THE LUPTON WINDOW can be depended on to stand up under conditions of unexpected severity.

Rules and Requirements of the National Board of Fire Underwriters provide that metal is to be "of at least No. 24 gauge."

Lupton window-frames are No. 22 gauge galvanized steel.* Sashes No. 24 gauge. No other window has metal heavier than No. 24 gauge for frames, unless especially provided for in specifications. For many windows even No. 26 gauge is used for frames, the Underwriters' rules to the contrary notwithstanding.

No. 24 gauge may prove to be sufficient, but there can be no doubt as to the all-sufficiency of No. 22 gauge. In THE LUPTON WINDOW assurance is made doubly sure by the use of the heavier metal.

Why is it that other window manufacturers adopt the "least" standard of the Underwriters, or even go lighter, in weight of metal?

Why is it that every other window, unless especially specified, is below the Lupton standard?

Because no other plant is so well equipped to work the heavy metal used in Lupton window-frames.

* THE LUPTON WINDOW is also made of copper, copper-coated steel, aluminum-coated steel when specified.



Joining metal window-frames by dovetailed clinches—a method of construction peculiar to THE LUPTON WINDOW.

Superior joining of frames

Not only is heavier metal a distinguishing feature of Lupton window-frames, but the Lupton method of joining sheet-metal frames is special and exclusive. Even if the Lupton standard of No. 22 gauge metal were specified and windows made accordingly, yet the frames if joined by any other method would be inferior.

A Lupton window-frame proper is four pieces of sheet metal. The head of the frame is one piece. Each jamb is a single piece. The sill is one piece. These parts are put together—*not with rivets*, but by the Lupton system of joining by dovetail clinches. Each part is made with tenons and mortises. The tenons are fitted into the mortises and clinched. As each of the joining parts has both tenons and mortises the result is a re-enforcement of construction.

From an assurance standpoint, Lupton window-frame construction has an important value. Since the frame is practically a unit of metal of the same density, contraction and expansion are equal. By no possibility will any Lupton frame come apart under the influence of extraordinary temperatures.

Experiments have proved conclusively that rivets, used to form mitres, unbutton when metal window-frames are subjected to contraction and expansion by fire and water.



The Lupton Works has in its "glass house" at all times a larger reserve stock of wired glass—polished, ribbed, prism and mazed—than is carried anywhere else except by the glass-makers.

A precaution against delays.

Lupton sashes and glazing



Along with heavier metal and special joining in frames, THE LUPTON WINDOW has superior sash construction and glazing.

Sash-mitres are made by the Lupton exclusive method of tenons fitted into mortises and clinched. Muntins are formed of two identical pieces, interlocked, and presenting the same appearance both sides. Removable top and bottom sash-caps, provided to facilitate glazing, are secured in place by turn-buckles; no solder used.

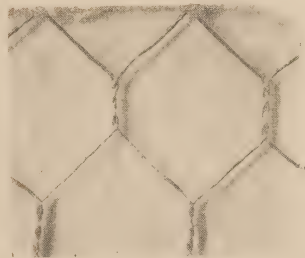
Glass is introduced down through top of sash-frame, and is received in channels produced by the Lupton peculiar construction of sash-frame and muntins. Into a sash of more than two lights a glass is inserted first, then a cross muntin, its end conforming exactly to the vertical muntin.

The channels form a $\frac{3}{4}$ -inch rabbet, affording ample resistive qualities. INSURANCE ENGINEERING is authority for the statement that "in many metal windows the glass is mounted with a bearing surface of $\frac{1}{4}$ -inch or even less." It is also true that windows are offered as fire-proof (?) with the ridiculously insecure glazing of strips of metal.

Since expansion has a tendency to straighten curved surfaces, the Lupton curved sash-frame and muntins grip the glass vice-like, when subjected to heat.

THE LUPTON WINDOW is glazed with $\frac{1}{4}$ -inch wired glass. The glass is as secure and as much a part of the window as the sash itself, thereby affording absolute window protection.

The efficacy of wired glass as a fire-stop depends on the sashes and frames supporting it. If frames are of so light-weight metal or so imperfectly made as to collapse, or sashes warp, or glazing is insecurely done, there is little advantage in wired glass.





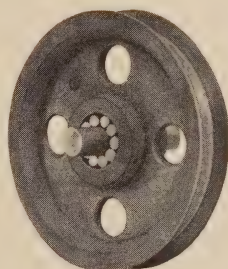
Assembling Lupton window frames and sashes

The Lupton Pulley



is of a special design, made expressly for THE LUPTON WINDOW. Axle and roller-bearings—of highest grade machine steel—are made in the Lupton machine shops, and pulley assembled there. Wheel and casing are of best gray iron: the wheel made with extra depth of sheave and the casing to not only protect the wheel but to prevent the chain from slipping off.

The Lupton pulley is placed directly over weight box and secured there by an improved method, special provision being made in the frame to receive the flat end, while the opposite end is fastened by a screw.



One-inch roller bearings



Contrast the Lupton pulley with the make-shift device here reproduced: An example of what was gotten in metal windows by a buyer who ignored competition on quality and awarded his window contract on price alone.



Where Lupton window-frames of unusual proportions are finished

The hardware equipment

of THE LUPTON WINDOW is thoroughly modern and of best quality.

Sash pulleys, with especially constructed one-inch roller-bearings.

Sash chains of absolute reliability, made expressly for THE LUPTON WINDOW.

Sash weights of the most approved sectional type.

Sash locks and lifts of Underwriters' required patterns.

The architectural appearance

presented by the standard types of THE LUPTON WINDOW is strictly high-class and in harmony with modern-style structures.

Special styles of frames to conform to unusual architectural requirements made to order.



Lupton frames ready for delivery to the John Wanamaker Store (1906)

Weather-proof qualities

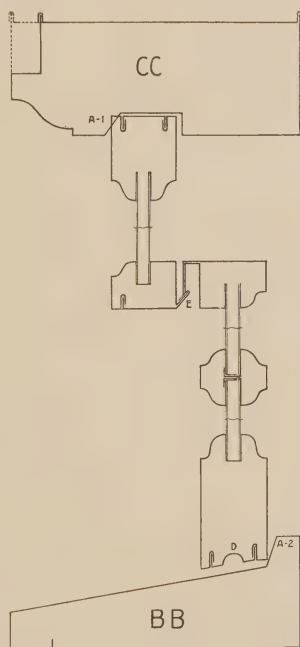
should be considered, in a metal window, equally with fire-resistive properties. Fire-proofness is a matter of insurance. Weather-tightness is a question of fuel economy and personal comfort. Lack of weather-tightness is a serious fault of the average metal window.

Lupton designing, together with the thoroughness of Lupton workmanship, produce a sheet-metal window as perfectly weather-tight as any window of any material can be constructed.

Lupton sashes slide freely, yet when closed are perfectly tight and non-rattling. This explains why:—

Bevel "A1" in pocket of head "CC" tightens the upper sash at the top. The meeting-rails interlock, making a wind-proof juncture, checkrail "E" drawing both sashes together and against the runways.

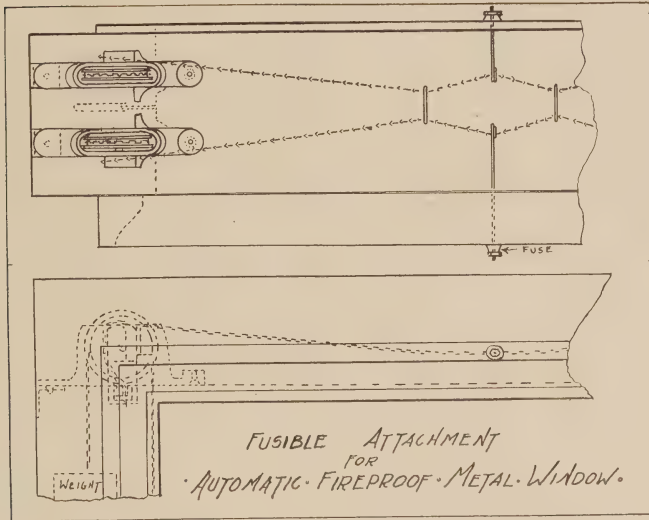
Bevel "A2" in sill "BB" tightens bottom sash. Moreover, these bevels, in head and sill, force both sashes firmly against the runways. Recess "D" prevents water from backing up on the sill by capillary attraction.





Lupton window-frames for a big operation awaiting delivery orders

Automatic closing sliding sashes



Sliding sashes are over and under weighted; and balanced by supporting the pulleys on saddles. Each saddle is held up by a chain tightened with a rod. The rods extend through the head and are separated by tightening nuts under which are fusible links.

At 165 degrees the link melts from under the nut, releasing chains, and the sashes close by gravity.

The sashes slide freely and close tightly. A slanting pocket at head of window, and the slanting off-set in the sill, serve, wedge-like, to tighten the entire window.



The Lupton Works has in use 700 feet of railroad sidings of its own

Delivery of Windows.

While investigating metal windows, it is a wise precaution to also seek information on the factory facilities of the concerns that father them.

Not what a factory says it can do, but what it does do—*counts*.

You may write delivery dates into the contract, you may even exact a guarantee,—but, if the shop that undertakes the job does not have the facilities, you will have to *wait* on your frames.

The hollow-metal window is comparatively a new thing. Some people may think that any tin-smith should be able to make frames and sashes out of sheet metal. For the matter of that, any carpenter can build a boat; but when it comes to a ship that will stand shot and shell,—that is different! And so it is with metallic windows.

THE LUPTON WINDOW factory is the largest, lightest and most completely equipped in America. Its capacity is more than equal to the heaviest demands. It *can* make better sheet-metal windows, and better deliveries, than any other window factory—*and does it!*

It has only needed an inspection of the Lupton plant to secure some of the biggest contracts ever written for metal windows.



The John Wanamaker New Department Store, Philadelphia
(One quarter finished—1906)

The finished structure will contain twenty-five hundred window openings. This building, to cost five million dollars, with its hundreds of thousands of dollars' worth of merchandise, will be protected by THE LUPTON WINDOW.

Lupton windows were first used by the John Wanamaker firm in its New York store. Sixty-five thousand square feet of window openings.

(Other installations, pages 48 to 57)

THE LUPTON WINDOW is—

Right in principle
Practical in design
Thorough in workmanship
Correct in architectural detail
Heavier in metal used in frames
Superior in the joining of frames
Superior in construction of sash-frames and muntins
Superior in method of glazing and holding in the
wired glass
Better in the kind and grade of hardware equipment
A tight window—non-rattling and weather-proof
Made dependably automatic closing when desired
Fire-proof by Underwriters' test
Approved by insurance experts
Delivered promptly

Patented and manufactured by

David Lupton's Sons Company

New York

Philadelphia

Detroit



Louisiana Purchase Exposition Medal

Awarded to

THE LUPTON WINDOW

on these specific counts :

Originality of ideas	Practicability of
Superiority of design	revolving
Weather-tightness	sliding sashes
Fire-proofness	Dependability of
when sashes are	automatic
glazed with wired glass	closing device

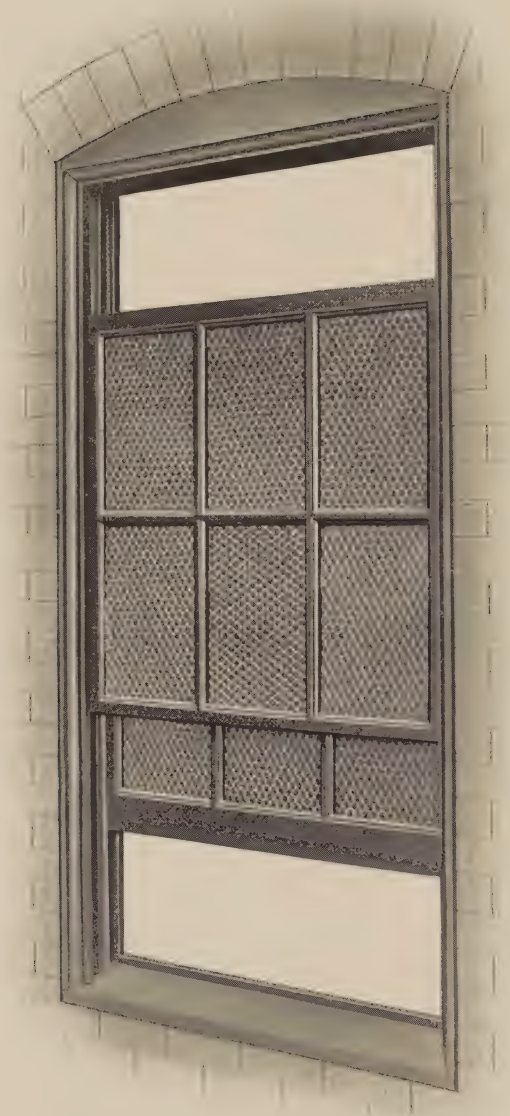
Lupton metal window superiority

The Lupton designs in sheet-metal windows, the Lupton construction of frames and sashes, the Lupton way of putting in the wired glass, the Lupton window-hardware—are *different*. Of these differences, combined with highest-class workmanship, consist the Lupton superiority.

Sixteen standard types

THE LUPTON WINDOW is made in sixteen different styles, or variations. Those in largest general demand are illustrated and described on the pages immediately following.

In addition to the sixteen standard types, special styles on special specifications are constantly going through the factory. A larger variety of sheet-metal windows is made in The Lupton Works than in any other plant in America.



THE LUPTON WINDOW. Type A

THE LUPTON WINDOW. Type A

Double hung, non-reversible sashes

The standard sheet-metal window most largely in use.

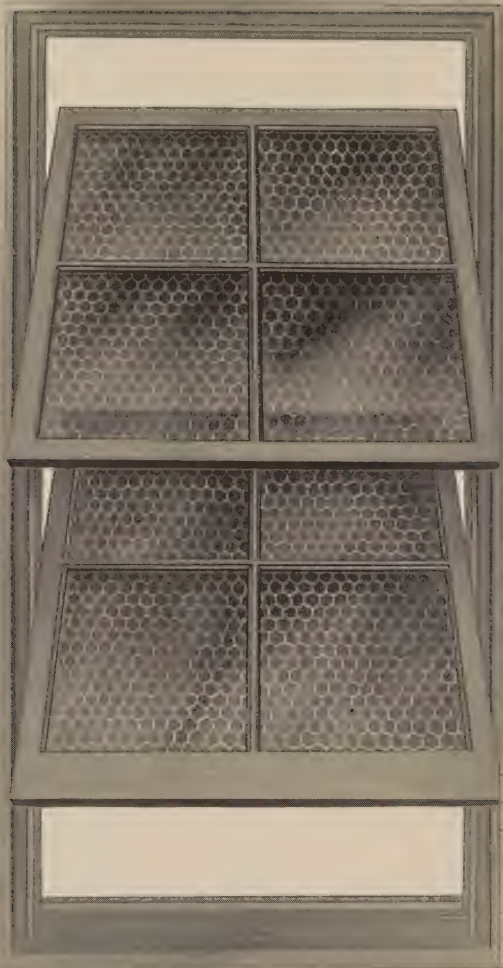
Equal in weather-tightness to a carefully built wooden window fitted with weather-strips of the most approved form.

The sash-pocket at the head of frame is made with a bevel which tightly closes the upper sash at the top and in against the runways. A similar bevel in sill tightens the lower sash there and forces it out against the runways. The meeting-rails interlock one with the other, drawing both sashes together and against the runways at that point. Thus the runways are made to form weather-strips. Construction described in detail page 19.

Jambs are constructed to permit of removal of runways for interior painting.

Type A can be equipped with automatic-closing device, as described page 21, at an advanced price.

For measuring instructions, see page 42.



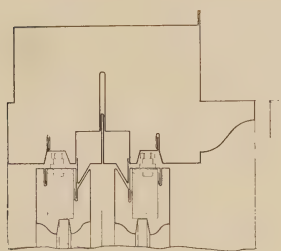
THE LUPTON WINDOW. Type B

THE LUPTON WINDOW. Type B

Double hung, reversible sashes

A window with sliding sashes which also *revolve*: the first and only metal window in which the sliding-and-revolving-sash idea is developed in an altogether practical and always workable way,—without impairment of weather-tightness or fire-proofness.

Revolving sashes simplify window cleaning; they do away with the danger attendant on cleaning windows from the outside, and, at the same time, with the necessity of employing men experts to do it.

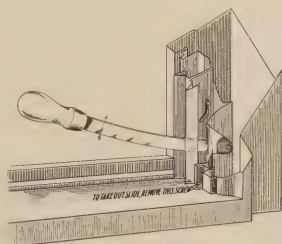


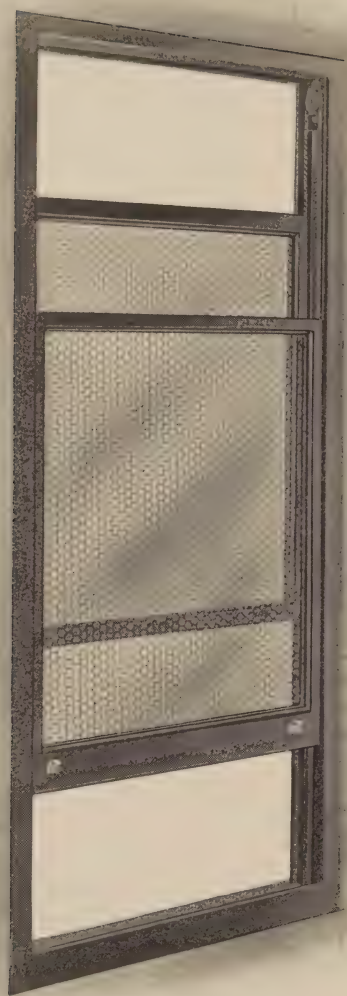
The revolving operation is simple: The sashes run on movable stiles. The stiles are provided with half-angular, half-vertical slots, and are guided by pins introduced through these slots (see illustrations). Upward motion of the lever moves the stiles back into jambs, allowing freedom for sashes to be revolved in either direction. Downward motion of the lever brings stiles forward and slots into position, with pins in vertical part. The stiles cannot be forced back or sashes revolved—except by use of the lever. Sash-chains end in special shoes, with tapering slots, receiving and securely holding the studs on which sashes revolve. No springs are used.

The stiles are placed in jambs, removable for installing weights or interior painting.

Type B can be equipped with automatic-closing device, as described on page 21, at an advanced price.

For measuring instructions, see page 43.





THE LUPTON WINDOW. Type C

THE LUPTON WINDOW. Type C

Self-balanced sashes

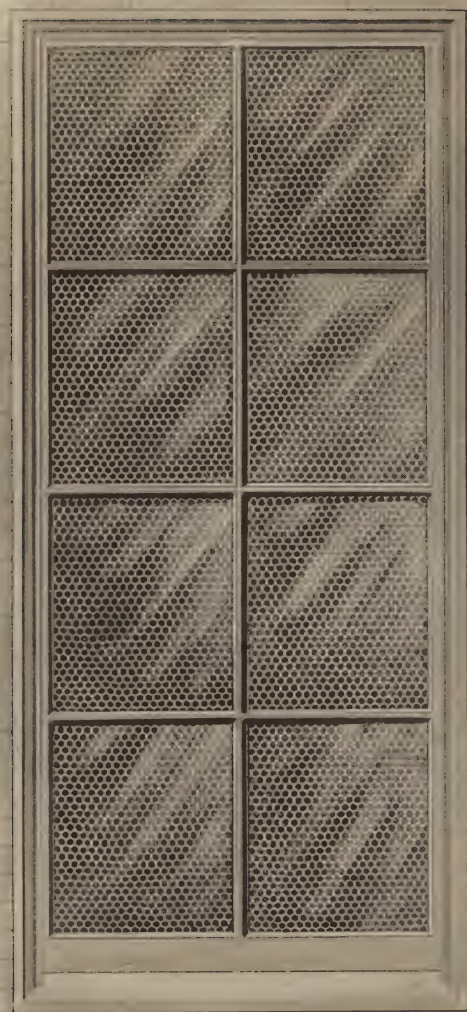
The sashes are hung one upon the other and move up and down at a common impulse.

This form of sliding-sash window, being less costly to produce, is desirable in operations where economy is an important consideration. It is employed to advantage especially in foundries, dyehouses and factories where ventilation is wanted top and bottom of the window-opening.

Type C has the same weather-proofing features referred to in connection with Type A, and shown in detail on page 19.

Type C can be made automatic-closing at an advanced price.

For measuring instructions, see page 44

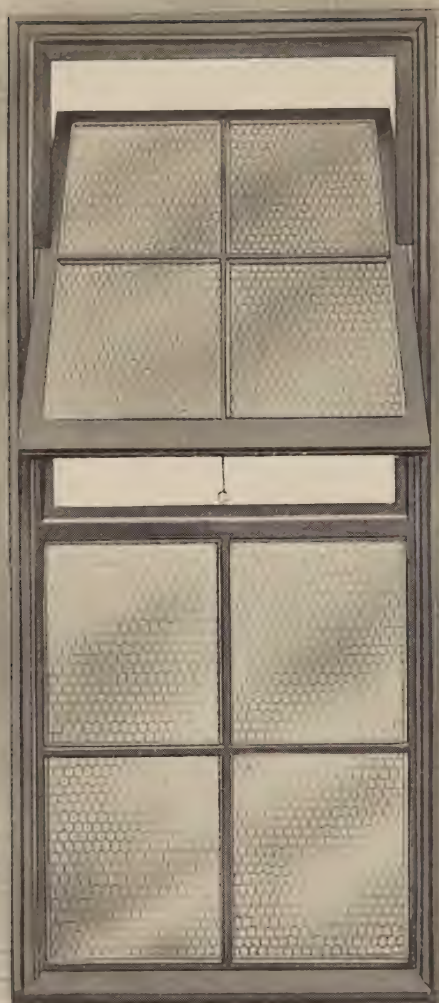


THE LUPTON WINDOW. Type F

THE LUPTON WINDOW. Type F

Stationary sash

A sheet-metal window designed for warehouses, factories, mills and other large buildings in which it is desirable or imperative to have window-openings permanently closed. A silk mill where a cold draught on the looms in operation would possibly injure the fabric, is a case in point.



THE LUPTON WINDOW. Type G

THE LUPTON WINDOW. Type G

Stationary lower, pivoted upper sash

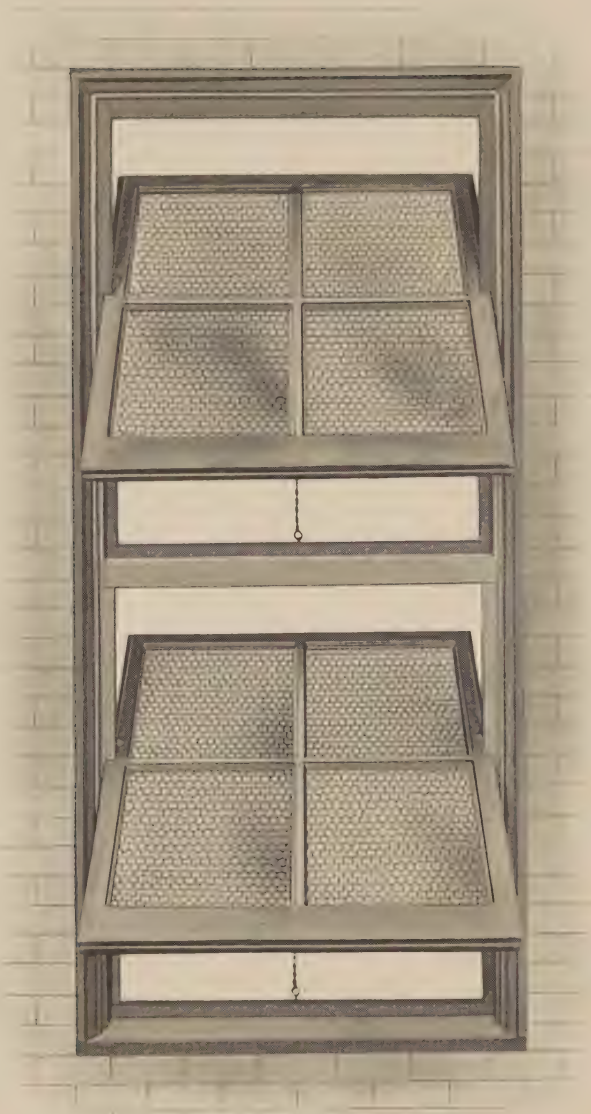
The illustration of Type G will serve also for Type H—which differs only in the arrangement of the sashes, the upper being stationary and the lower pivoted.

These windows are used where it is desirable to have window ventilation, yet not necessary or desirable to open both sashes.

Observe the ample contact surfaces on all sides of the pivoted sash. These, with the recess in bottom of lower sash-rail and similar recesses in side sash-rails, make the windows wind- and rain-tight.

The sash-chain is provided with a fusible link, making the pivoted sash automatic-closing on the approach of fire.

For measuring instructions, see page 45.



THE LUPTON WINDOW. Type 1

THE LUPTON WINDOW. Type I

Pivoted lower and pivoted upper sashes

A desirable and economical sheet-metal window for manufacturing plants in general. Affording the advantages of weather-proofness and automatic-closing by means of the fusible link.

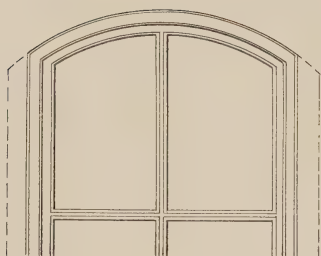
The sashes close tightly against weather strips of a full inch depth. The bottom rails of both upper and lower sashes are formed with a deep recess which prevents water working its way back. The side sash-rails are likewise recessed.

Both chains have fusible links. At a temperature of 165° the links melt and the sashes close and lock automatically. Fire outside will be retarded; or air will be kept from feeding and exciting a fire within.

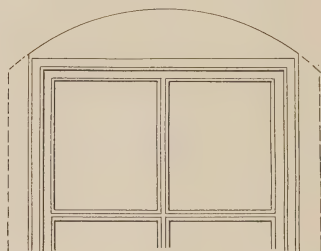
The Lupton New Sash-locking Device for horizontal pivoted sashes is thoroughly practical and reliable. Observe the points: (1) Malleable Iron. (2) So constructed that the bottom of sash is drawn tightly against sill on single pivoted and against impost on double pivoted window at the same instant that the top of sash is locked. (3) The action is positive, locking securely in both places, being mechanically correct. (4) Simple in construction, contains no springs to get out of order. (5) Locking devices applied to sashes at factory—insuring accuracy of fit.

For measuring instructions, see page 45.

A suggestion on circular-head windows



Not this ;—



but this.

Let the plans and specifications provide for segment top *with square inside frame and sash*. Thus the desired architectural effect can be produced at lower cost than with a curved inside frame and curved sash-rail. Not only so, but the square inside finish makes a more satisfactory window.

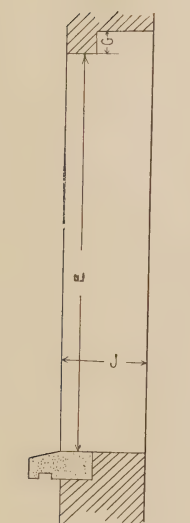
Measurements for windows

should be supplied as follows:

- | | |
|--|---------------------------------------|
| D—Width of clear opening in wall. | B—Depth of reveal. |
| E—Clear height of square head opening. | C—Inner edge of reveal to inner face. |
| F—Rise of arch. | A—Offset. |
| G—Offset at the top. | J—Thickness of wall. |

IN OLD BUILDINGS, where wood windows are replaced by metal, accurate, full size sections through head, sill and sides should be given in addition to above measurements, showing any woodwork that may remain to be covered with metal.

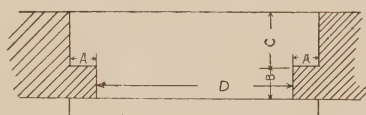
IN ANY CASE, where the sections of wall are not built as shown in Figs. 2-3, a full size drawing of sections should be sent.



VERTICAL SECTION

Fig. 1.

Vertical section through a square head opening.



HORIZONTAL SECTION

Fig. 2.

Horizontal section.



FRONT ELEVATION

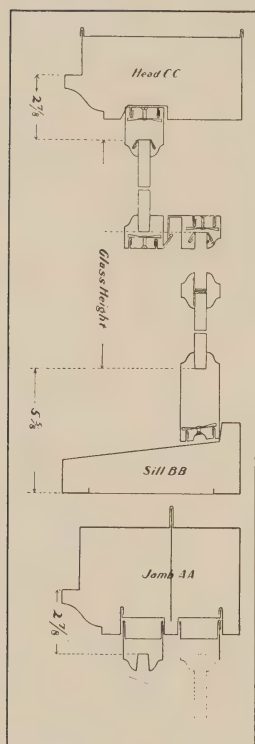
Fig. 3.

Elevation of a circular head opening.

NOTE.—IN MEASURING clear openings do not measure height from outer edge of stone sill, but set rule on top of stone sill where it intersects the outer face of wall.

(Measuring instructions continued on page 42.)

Measuring for Standard Type A Lupton Window



First, determine the out-to-out glass dimensions of window, based on the size and the number of lights desired.

Then arrive at the size of wall-opening, as follows:

Width of Wall-Opening.—To total glass width add $5\frac{3}{4}$ inches: this being twice $2\frac{7}{8}$ inches, the space each side of the glass which is occupied by sash- and frame-members in this type of window.

Height of Square-head Opening.—To total glass height add $8\frac{1}{2}$ inches: this being $2\frac{7}{8}$ inches plus $5\frac{5}{8}$ inches, the spaces, respectively above and below the glass, which are occupied by the sash- and frame-members in this type of window.

Thus, a Type A Lupton Window of twelve lights of a size twelve by sixteen inches, would require a wall-opening of a width $41\frac{3}{4}$ inches and a height $72\frac{1}{2}$ inches.

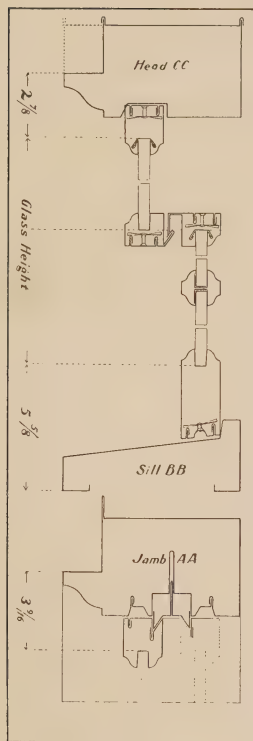
For example: $12'' \times 3 + 5\frac{3}{4}'' = 41\frac{3}{4}''$ (width).

$16'' \times 4 + 8\frac{1}{2}'' = 72\frac{1}{2}''$ (height).

For segment head, add spring of segment to height obtained as above. The radius should be specified; in the absence of definite information it will be made to equal the width of wall-opening.

NOTE.—Heavier sash-rails are recommended for windows over 5 by 8 feet. To compute the opening for Type A window with the heavier sash, add $1\frac{1}{4}$ inches to the width, and $3\frac{3}{8}$ inches to the height, as obtained above. Illustrations in this catalog are based on standard size sash-rail. The increased width and height are in excess of the standard.

Measuring for Standard Type B Lupton Window



First, determine the out-to-out glass dimensions of window, based on the size and the number of lights desired.

Then, arrive at the size of wall-opening, as with Type A :

Width of Wall-Opening.—To total glass width add $7\frac{1}{8}$ inches: this being twice 3 9-16 inches, the space each side of the glass which is occupied by sash- and frame-members in this type of window.

Height of Square-head Opening.—To total glass height add $8\frac{1}{2}$ inches: this being $2\frac{7}{8}$ inches plus $5\frac{5}{8}$ inches, the spaces, respectively above and below the glass, which are occupied by the sash- and frame-members in this type of window.

Thus, a Type B Lupton Window, following the example employed on the previous page, would require a wall-opening $43\frac{1}{8}$ by $72\frac{1}{2}$ inches.

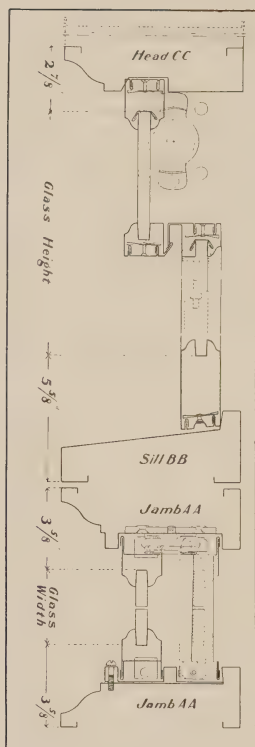
$$12'' \times 3 + 7\frac{1}{8}'' = 43\frac{1}{8}'' \text{ (width).}$$

$$16'' \times 4 + 8\frac{1}{2}'' = 72\frac{1}{2}'' \text{ (height).}$$

For segment head, add spring of segment to height obtained as above. The radius should be specified; in the absence of definite information, it will be made to equal the width of wall-opening.

NOTE.—To compute the opening for Type B window with the heavier sash, recommended for windows over 5 by 8 feet, add $1\frac{1}{4}$ inches to the width, and $3\frac{3}{8}$ inches to the height, as obtained above.

Measuring for Standard Type C Lupton Window



First, determine the out-to-out glass dimensions of window, based on the size and the number of lights desired.

Then, arrive at the size of wall-opening, as follows :

Width of Wall-Opening.—To total glass width add $7\frac{1}{4}$ inches: this being twice $3\frac{5}{8}$ inches, the space each side of the glass which is occupied by sash- and frame-members in this type of window.

Height of Square-head Opening.—To total glass height add $8\frac{1}{2}$ inches: this being $2\frac{7}{8}$ inches plus $5\frac{5}{8}$ inches, the spaces, respectively above and below the glass, which are occupied by the sash- and frame-members in this type of window.

Thus, to continue the former example, a Type C Lupton Window of twelve lights of a size twelve by sixteen inches, would require a wall-opening of $43\frac{1}{4}$ by $72\frac{1}{2}$ inches.

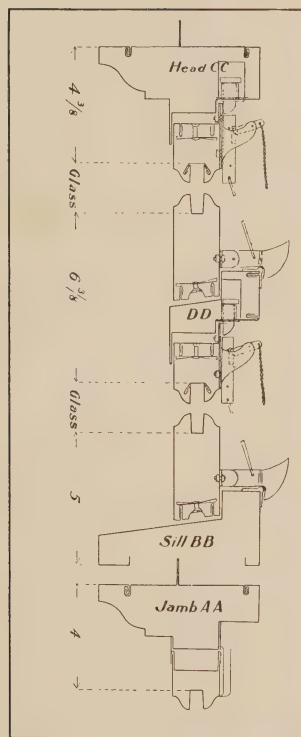
$$12'' \times 3 + 7\frac{1}{4}'' = 43\frac{1}{4}'' \text{ (width).}$$

$$16'' \times 4 + 8\frac{1}{2}'' = 72\frac{1}{2}'' \text{ (height).}$$

For segment head, add spring of segment to height obtained as above. The radius should be specified; in the absence of definite information, it will be made to equal the width of wall-opening.

NOTE.—Heavier sash-rails are recommended for windows over 5 by 8 feet. To compute the opening for Type C window with the heavier sash, add $1\frac{1}{4}$ inches to the width, and $3\frac{3}{8}$ inches to the height, as obtained above.

Measuring for Standard Type G, H or I Lupton Window



After determining total glass width and height, obtain the size of wall-opening, as follows:

Width of Wall-Opening.—To total glass width add 8 inches: this being twice 4 inches, the space each side of the glass which is occupied by sash- and frame-members in Types G, H and I.

Height of Square-head Opening.—To total glass height add $15\frac{3}{4}$ inches: this being $4\frac{3}{8}$ inches plus $6\frac{3}{8}$ inches plus 5 inches, the spaces respectively above, between and below the glass, which are occupied by the sash- and frame-members in Types G, H and I.

Thus, a Type G, H or I Lupton Window of eight lights of a size twelve by sixteen inches, would require a clear wall-opening of a width 32 inches and a height $80\frac{3}{8}$ inches.

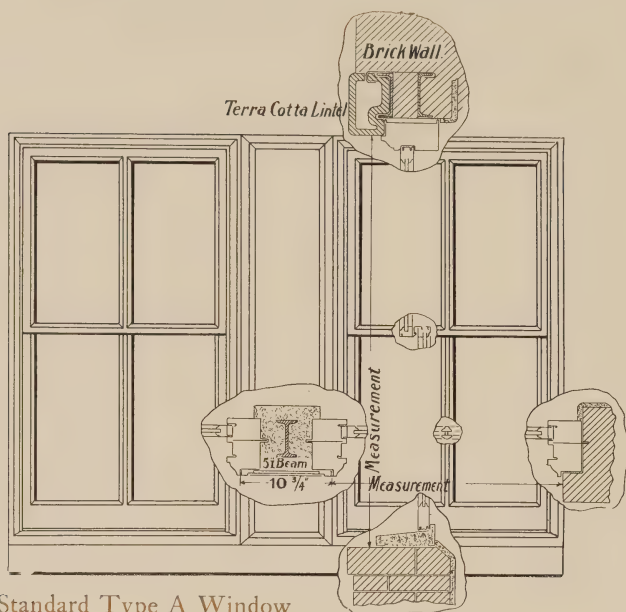
For example:

$$12'' \times 2 + 8'' = 32'' \text{ (width).}$$

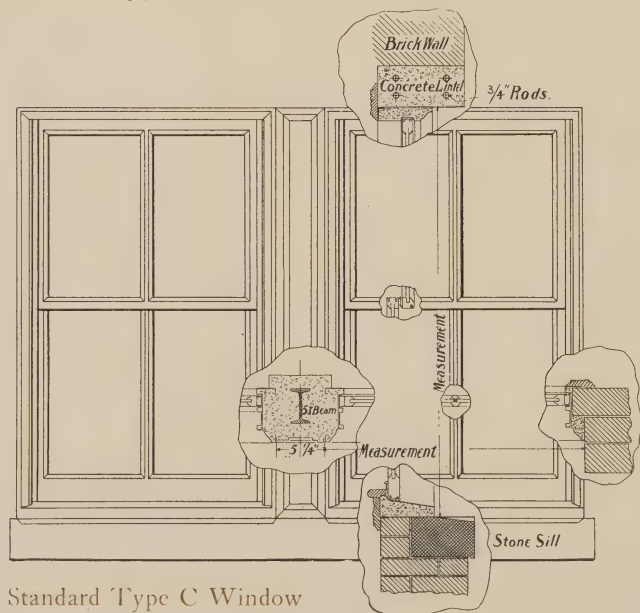
$$16'' \times 4 + 15\frac{3}{4}'' = 79\frac{3}{4}'' \text{ (height).}$$

For segment head, add spring of segment to height obtained as above. The radius should be specified; in the absence of definite information, it will be made to equal the width of wall-opening.

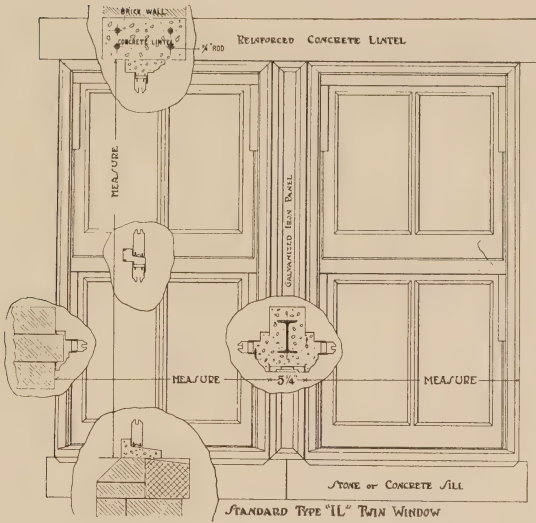
Mullioned Windows



Standard Type A Window



Standard Type C Window



Mullioned Windows should be constructed strictly in accordance with the Underwriters' requirements: *Rule 19.—Mullioned Windows* (Adopted May, 1906).

a. Where openings are in excess of 5 by 9 feet, the metal frames containing the sash or glass to be reinforced at every point of division by I beams thoroughly protected by approved fire-proofing.

b. I beams to be securely fastened into the brickwork, proper allowance being made for expansion of the beams when heated.

In new buildings the reinforcing members should be installed as the building is erected.

c. The depth of the I beam to be not less than 5 inches. This should be increased where the openings are in excess of 9 feet.

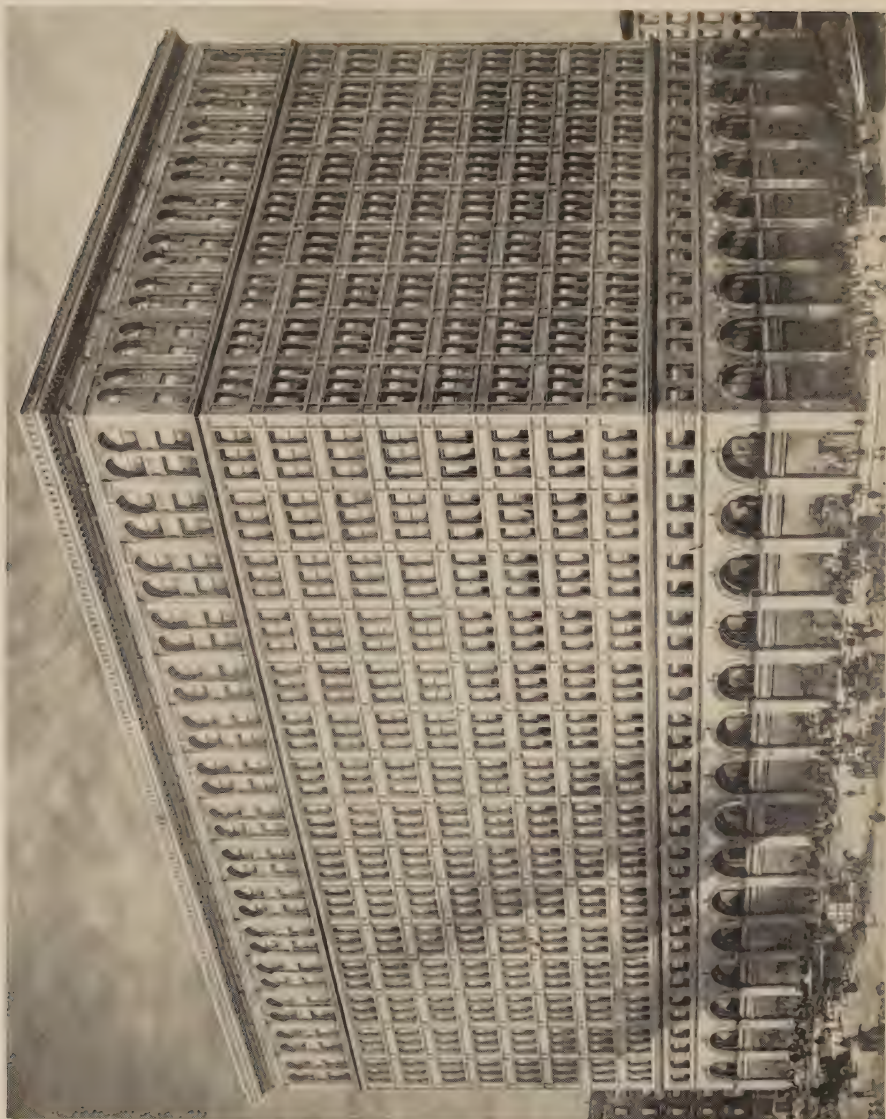
d. I beam to be provided with at least 2 inches of tile, concrete or other approved material on the flanges and at least 2½ inches next to the web. The amount of fire-proofing next to the web should be increased on large beams.

e. Metal frames to be securely attached to the reinforcing members.

In most cases the reinforcing members should be thoroughly enclosed by the metal parts of the frames, care being taken to rivet or otherwise fasten the parts at points of junction so as to resist fire. Purely ornamental parts may be fastened by soldering.

The drawings show the correct installation of frames and mullions. Mullioned construction is not a part of the windows. The reinforcing members should be installed as the building is erected.

We advocate the use of single openings rather than mullioned windows.



The John Wanamaker New Department Store, New York

Architects: D. H. BURNHAM & Co., Chicago

Superintendent: WM. C. HADDOCK, Philadelphia

1880 Lupton Windows



Philadelphia Rapid Transit Co.'s new car barn at Sixty-ninth and Market Streets, the Elevated Terminal, showing Lupton Windows of great size



The Babbitt Plant, at Granton, N. J.
All architectural metal work in this enormous plant was done by David Lupton's Sons Company,
including Lupton fire-proof hollow-metal Windows and Lupton skylights.



Security Building, Bridgeport, Conn.

Window-opening protected by The Lupton fire-proof hollow-metal Windows.

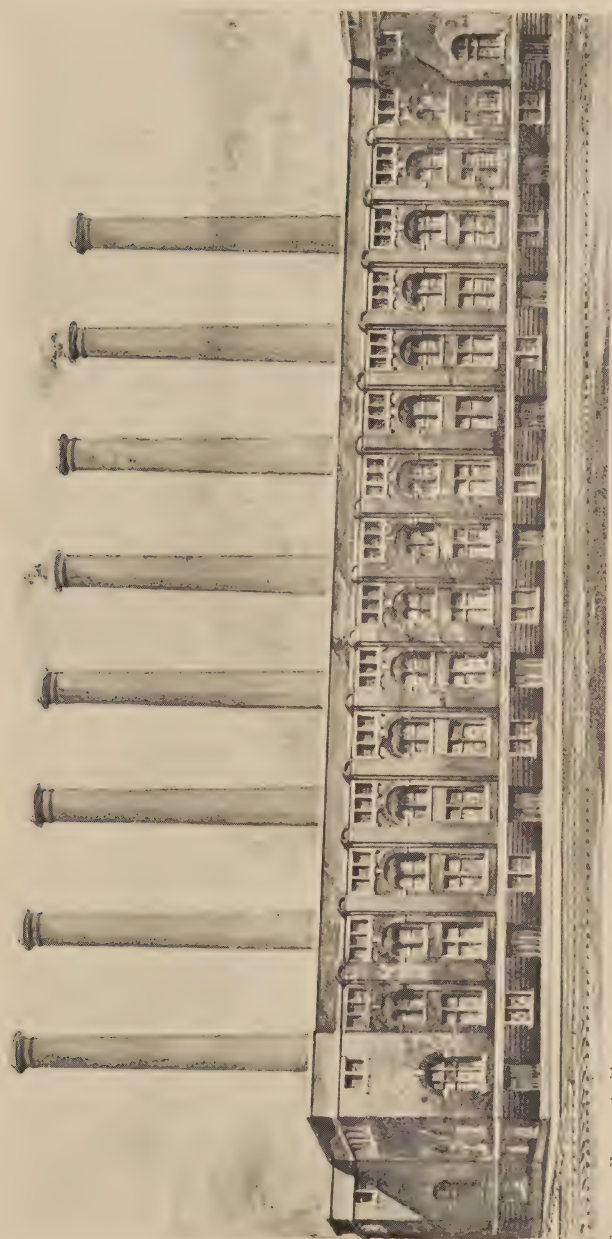
416 double-hung windows,		5883 square feet
28 pivoted windows,		944 square feet
14 stationary windows,		137 square feet
1 self-balanced window,		15 square feet



BALLINGER & PEROT, Architects, Philadelphia

The Ketterlinus Building, Philadelphia

Window-opening protected from fire by The	Lupton fire-proof hollow-metal Window
119 double-hung windows, 5027 square feet	6 bulk windows, ... 633 square feet
18 pivoted windows, . . . 637 square feet	2 bulk windows, with door, 339 square feet



TWINING-HEATH, Architects

Philadelphia Rapid Transit Co. Power House, Delaware Avenue and Poplar Street, Philadelphia
Largest of its kind in Philadelphia when completed.



Wm. Montgomery & Co.'s building, Philadelphia.

A large wholesale grocery house which shows the utility of THE LUPTON WINDOW for large warehouses.



FIELD, HINTCHMAN & SMITH, Architects, Detroit, Mich.

JOHN H. LEE, Builder, Troy, N. Y.

Troy Bazaar, Troy.

The new Frear building in Troy, N. Y., shows Lupton fire-proof hollow-metal Windows of special design. Note the diamond-pane windows in bridge connecting the two stores.



EDGAR V. SEELER, Architect

DOYLE & DOAK, Builders

New building of the Evening Bulletin, Philadelphia.

A fine type of the modern newspaper building. All window-openings protected from fire with THE LUPTON WINDOW.



ROGERS & MACFARLANE, Architects, Detroit, Mich.

Murphy power house, Detroit.

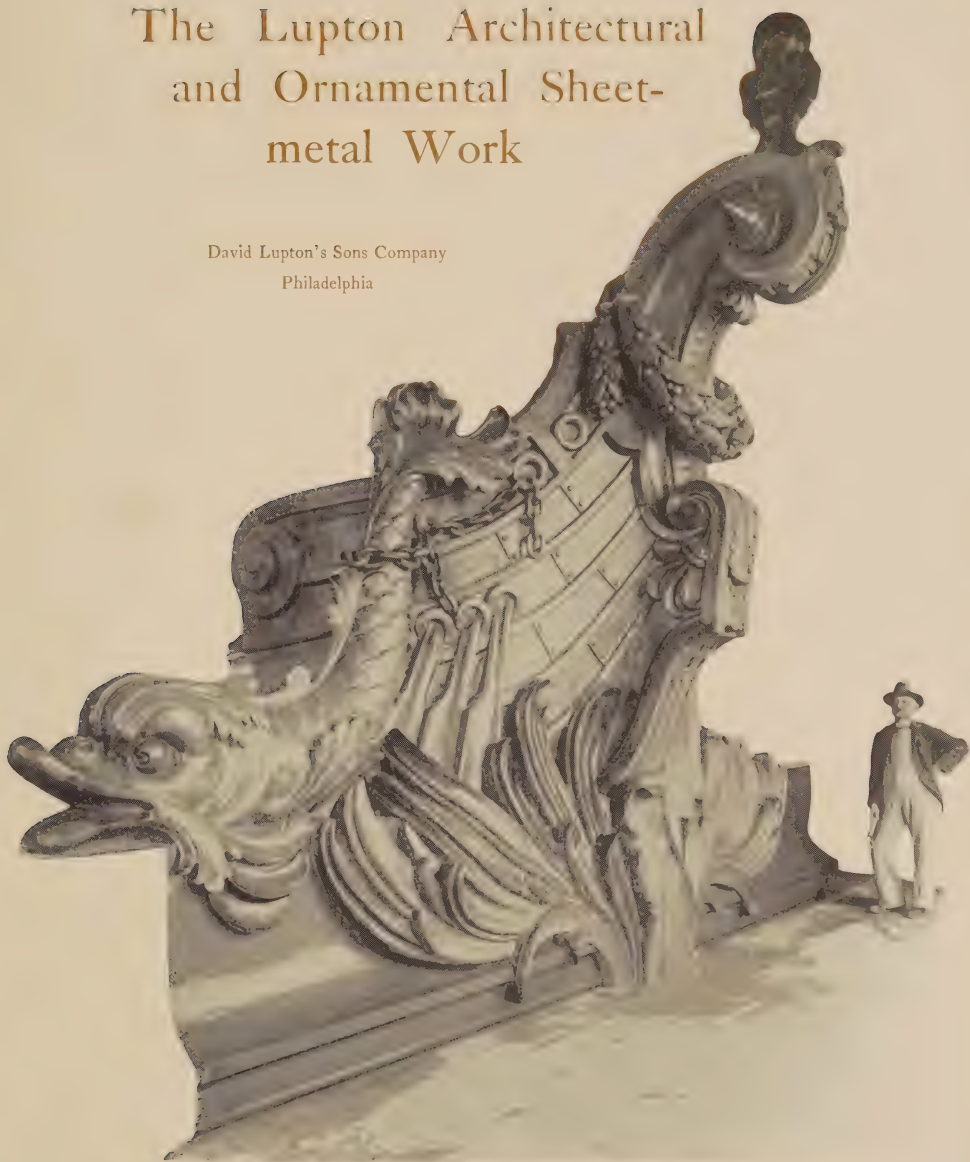
This plant, the vital heart of a city's power and light, has its window-openings protected from fire by The Lupton fire-proof hollow-metal Window.

The installations herein illustrated serve to show the wide range in character of structures in which Lupton window-frames and sashes are employed.



The Lupton Architectural and Ornamental Sheet- metal Work

David Lupton's Sons Company
Philadelphia



Prow of Viking Ship, for Erie Railroad Ferry House, Twenty-third Street, New
York. Design by K. M. Murchison, Jr., and L. R. Metcalfe, Associated
Architects, New York. Done in copper at The Lupton Works.



The original plaster model of the Prow of Viking Ship,
shown on the previous page.

The Lupton Works

is equipped for the construction of architectural sheet-metal work without limit in kind or design.

Only designs thoroughly practical and adapted to wide general use have been selected for illustration in the following pages.

Estimates on special work will be furnished promptly. Drawings may be sent by express, or otherwise, at our expense. Lupton material and workmanship are guaranteed strictly first-class.

Prices are quoted for *galvanized* iron, unless otherwise stated.

Lupton facilities for rapid production are unsurpassed. Prompt deliveries can be relied on.



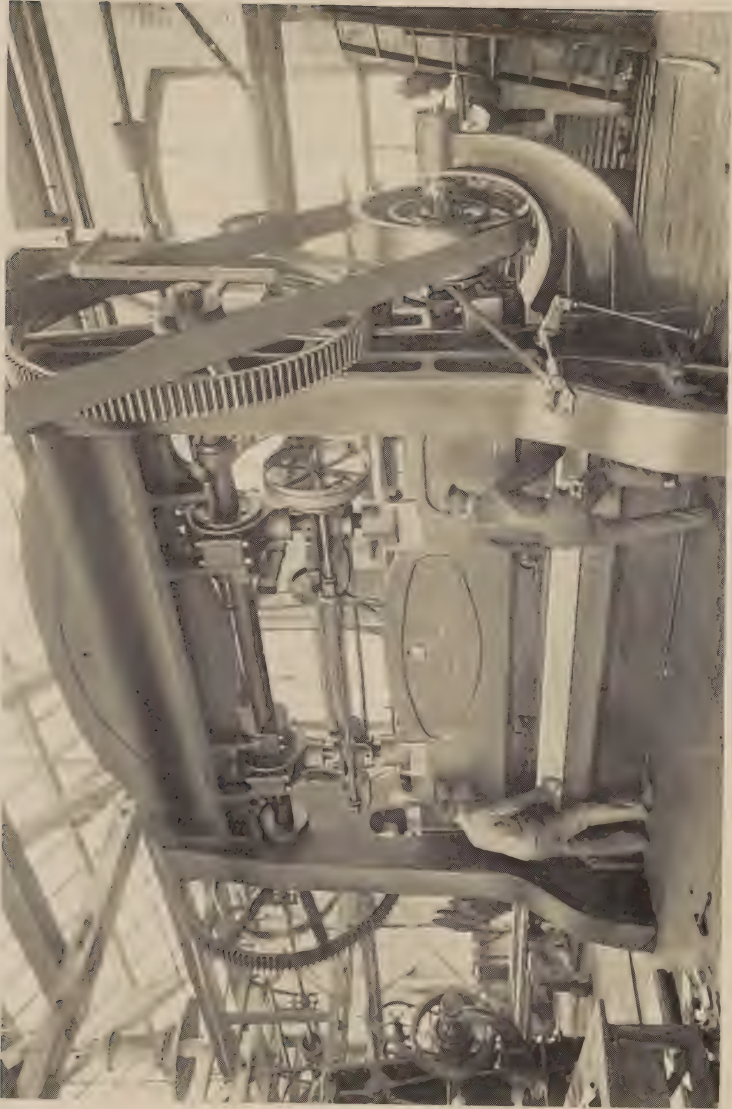
Copper clock tower, John B. Stetson Building, Philadelphia. Erected 1890. No repairs have been necessary.

David Lupton's Sons Company

New York

Philadelphia

Detroit



The giant cornice press of The Lupton Works. Largest in the world. 90,000 pounds. 47 inches between housings

Lupton Cornice Work

is guaranteed to be first-class in every respect. The thoroughly complete and modern equipment of the Lupton cornice shops is in itself assurance of high-grade results. Moreover, the Lupton experience in sheet-metal work dates from 1871.

Lupton Cornices are supplied complete in as long sections as are conveniently transported. As a rule, all brackets, mouldings and ornaments are attached, and only vertical joints are necessary at the building. Each part is marked and numbered. Thus, with the construction drawings furnished with the work, the erection is simplified.

Any cornice, or other architectural metal work, made from drawings, in galvanized iron or copper.

Prices quoted in this catalog are for *galvanized* iron.

David Lupton's Sons Company

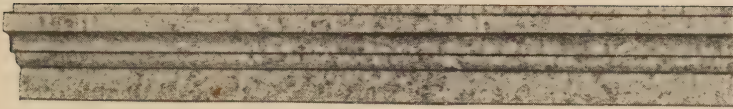
New York

Philadelphia

Detroit



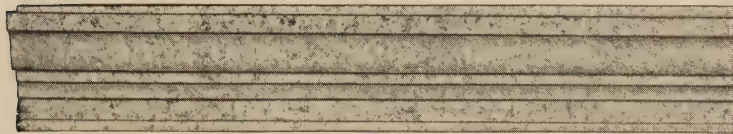
The superior effectiveness of Lupton cornices and ornamental sheet-metal work is due in part to the high standard of excellence insisted upon in the die-making shop of The Lupton Works.



No. 1. Height, 6 inches. Projection, 4 inches. Price per foot, 20 cents.



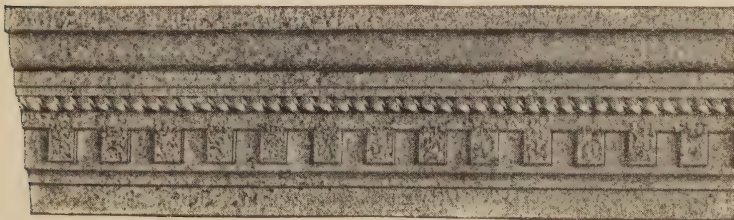
No. 2. Height, 6 inches. Projection, 4 inches. Price per foot, 20 cents.



No. 3. Height, 8 inches. Projection, 5 inches. Price per foot, 25 cents.



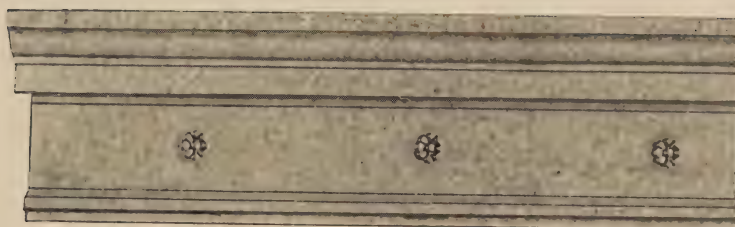
No. 4. Height, 12 ½ inches. Projection, 6 inches. Price per foot, 30 cents.



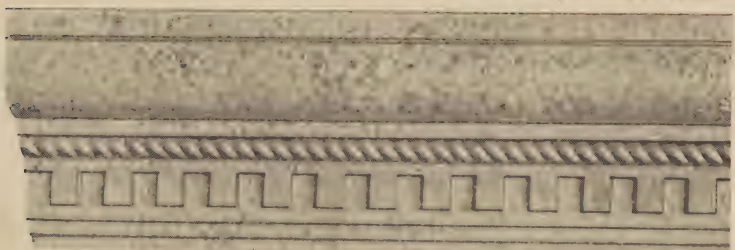
No. 5. Height, 16 inches. Projection, 8 inches. Price per foot, 40 cents.



Main cornice- and window-shop of The Lupton Works. 70 by 410 feet



No. 6. Height, 15 inches. Projection, 9 inches. Price per foot, 45 cents.



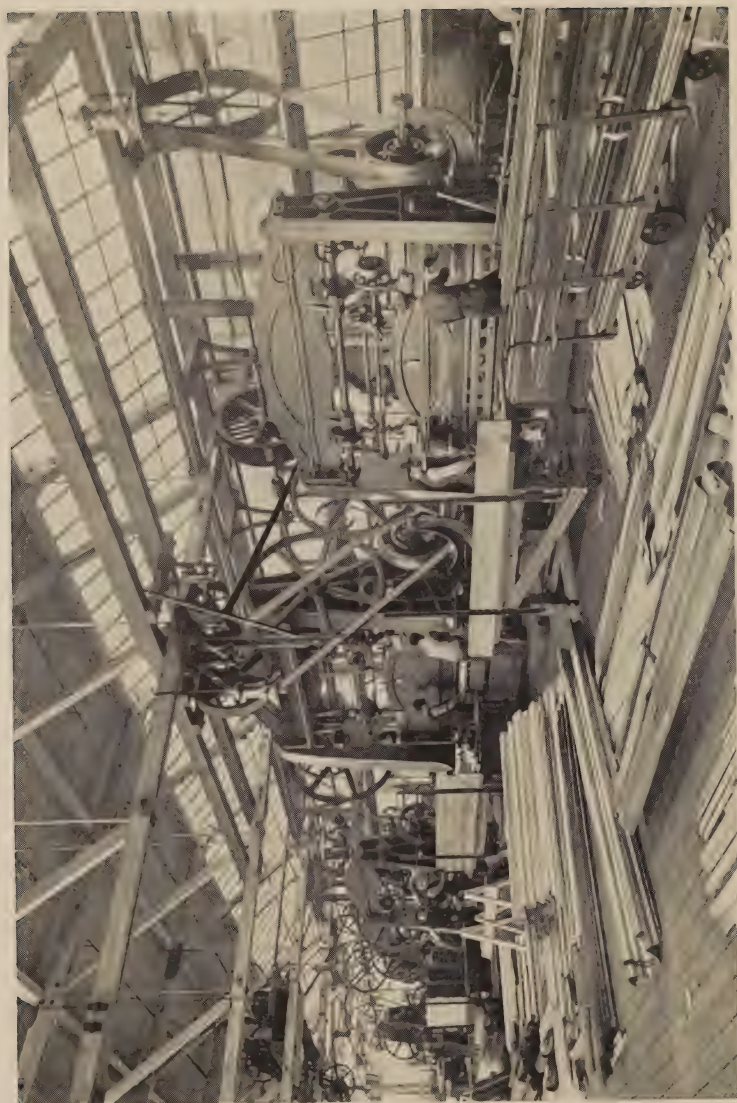
No. 7. Height, 18 inches. Projection, 10 inches. Price per foot, 50 cents.



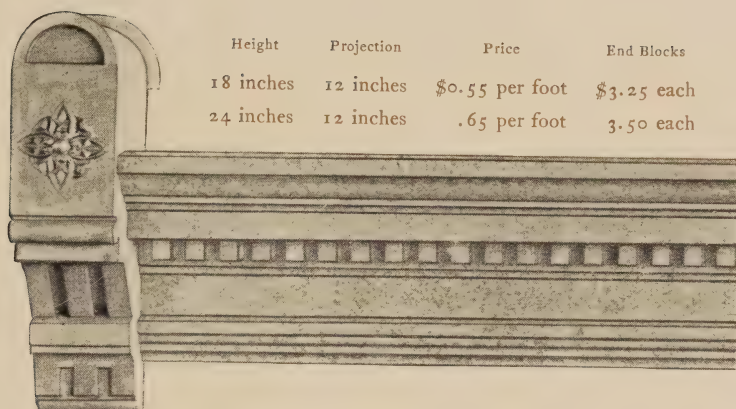
No. 8. Height, 24 inches. Projection, 12 inches. Price per foot, 65 cents.



No. 9. Height, 20 inches. Projection, 10 inches. Price per foot, 60 cents.

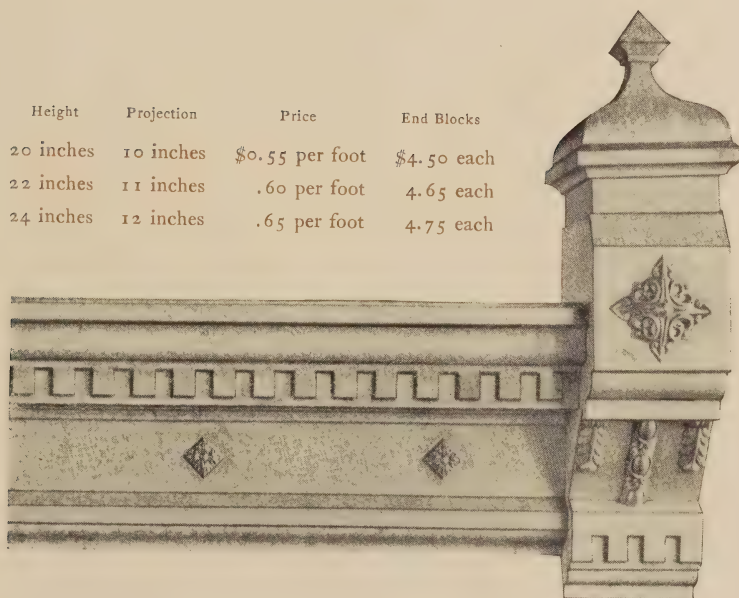


The Lupton Works has more cornice and window presses than any other sheet-metal plant in America



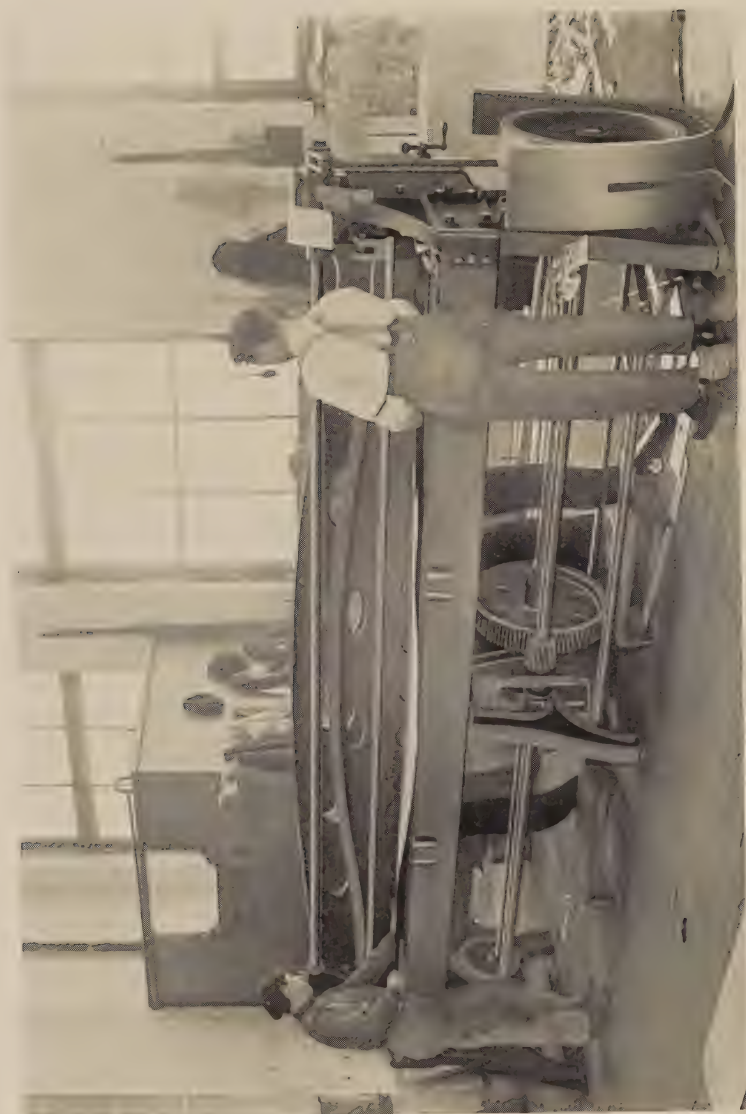
Height	Projection	Price	End Blocks
18 inches	12 inches	\$0.55 per foot	\$3.25 each
24 inches	12 inches	.65 per foot	3.50 each

No. 10



Height	Projection	Price	End Blocks
20 inches	10 inches	\$0.55 per foot	\$4.50 each
22 inches	11 inches	.60 per foot	4.65 each
24 inches	12 inches	.65 per foot	4.75 each

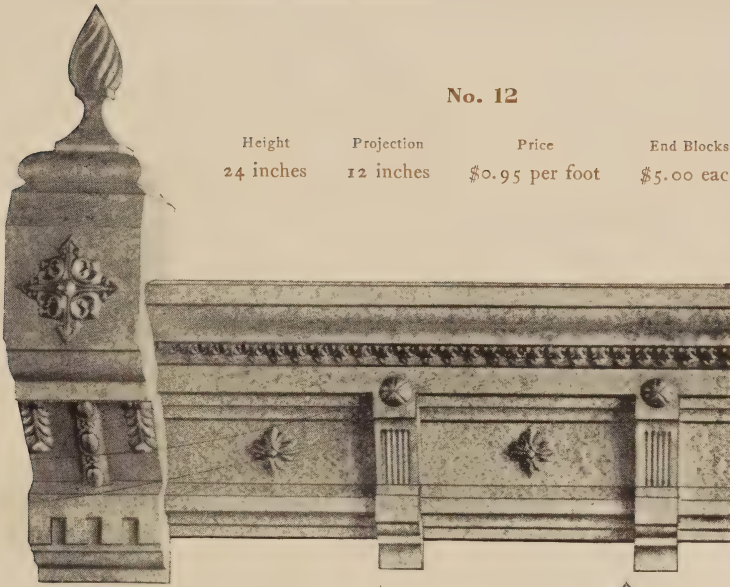
No. 11



The Lupton Works has the largest metal shears in the world, cutting a 157-inch sheet ;
and other shears cutting 120 inches. Altogether an unequaled equipment.

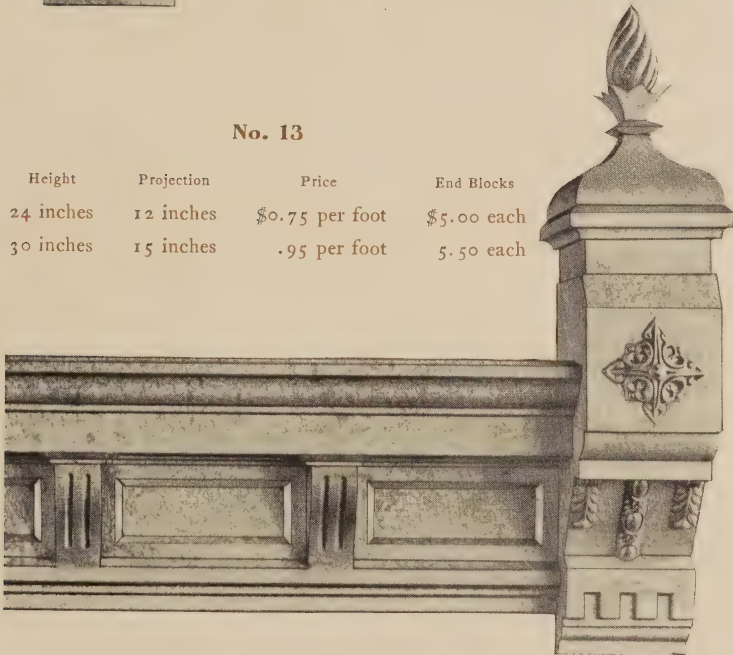
No. 12

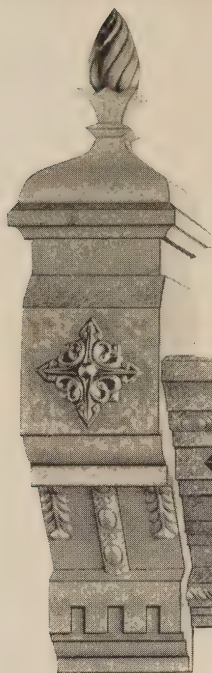
Height	Projection	Price	End Blocks
24 inches	12 inches	\$0.95 per foot	\$5.00 each



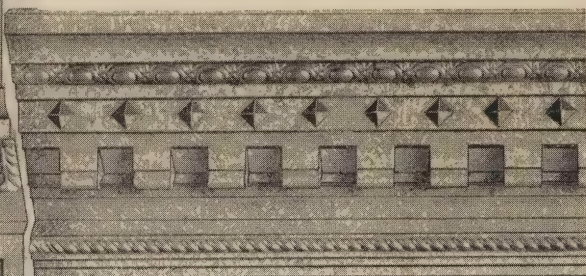
No. 13

Height	Projection	Price	End Blocks
24 inches	12 inches	\$0.75 per foot	\$5.00 each
30 inches	15 inches	.95 per foot	5.50 each

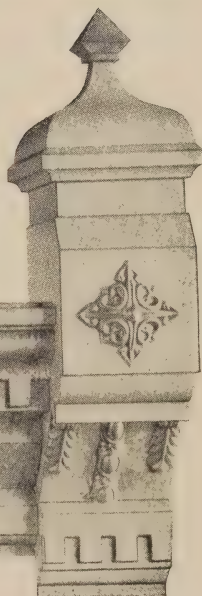
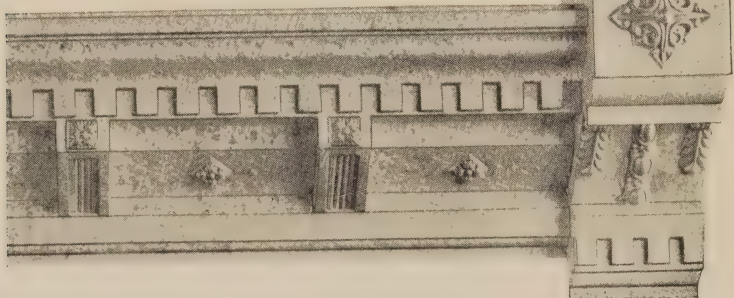


**No. 14**

Height	Projection	Price	End Blocks
24 inches	14 inches	\$1.10 per foot	\$5.00 each

**No. 15**

Height	Projection	Price	End Blocks
18 inches	9 inches	\$0.65 per foot	\$4.40 each
20 inches	10 inches	.70 per foot	4.50 each
22 inches	11 inches	.75 per foot	4.65 each
24 inches	12 inches	.85 per foot	4.75 each
26 inches	13 inches	.90 per foot	4.85 each
28 inches	14 inches	.95 per foot	5.00 each
30 inches	15 inches	1.00 per foot	5.25 each
36 inches	18 inches	1.20 per foot	5.75 each



No. 16

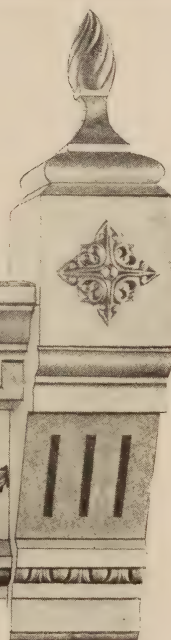


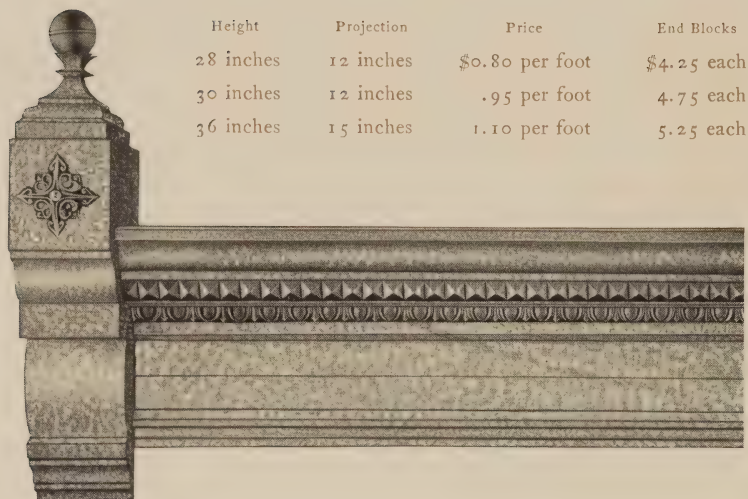
Height	Projection	Price	End Blocks
18 inches	10 inches	\$0.75 per foot	\$4.40 each
20 inches	10 1/2 inches	.80 per foot	4.50 each
22 inches	10 1/2 inches	.85 per foot	4.65 each
24 inches	12 inches	.90 per foot	4.75 each
26 inches	12 inches	.95 per foot	4.85 each
28 inches	14 inches	1.10 per foot	5.00 each
30 inches	15 inches	1.15 per foot	5.25 each
36 inches	16 inches	1.25 per foot	5.75 each



No. 17

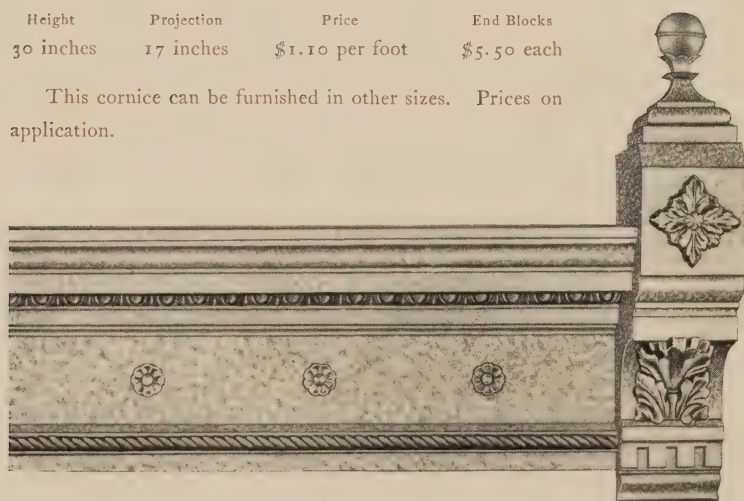
Height	Projection	Price	End Blocks
24 inches	12 inches	\$0.90 per foot	\$4.50 each
30 inches	15 inches	1.15 per foot	5.00 each



No. 18**No. 19**

Height	Projection	Price	End Blocks
30 inches	17 inches	\$1.10 per foot	\$5.50 each

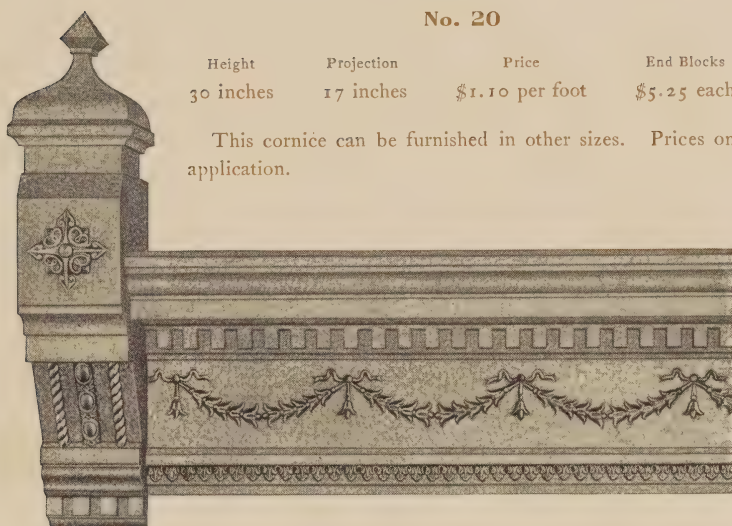
This cornice can be furnished in other sizes. Prices on application.



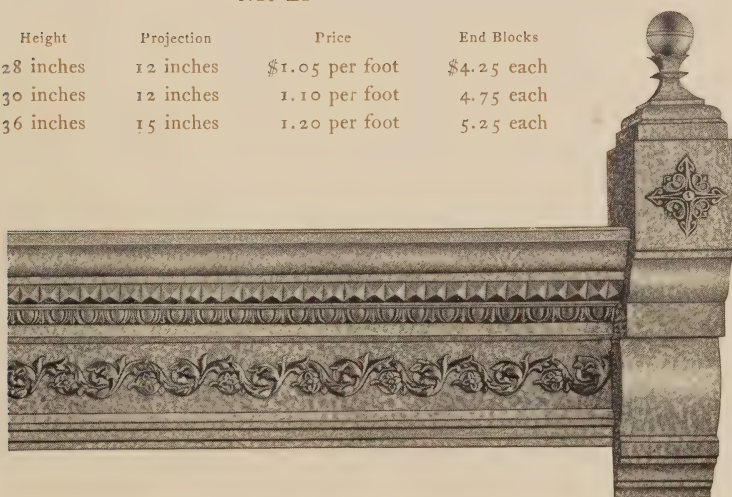
No. 20

Height	Projection	Price	End Blocks
30 inches	17 inches	\$1.10 per foot	\$5.25 each

This cornice can be furnished in other sizes. Prices on application.


No. 21

Height	Projection	Price	End Blocks
28 inches	12 inches	\$1.05 per foot	\$4.25 each
30 inches	12 inches	1.10 per foot	4.75 each
36 inches	15 inches	1.20 per foot	5.25 each



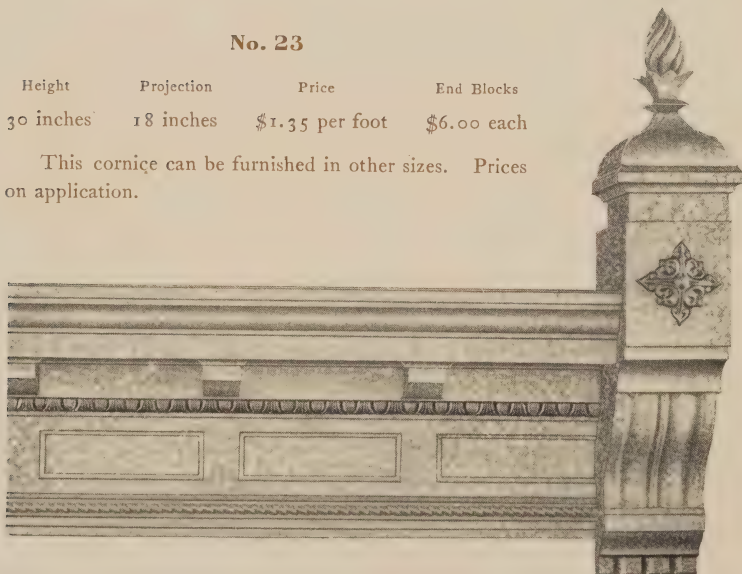
**No. 22**

Height	Projection	Price	End Blocks
24 inches	12 inches	\$1.00 per foot	\$7.50 each
28 inches	16 inches	1.15 per foot	7.75 each
30 inches	18 inches	1.25 per foot	8.00 each
36 inches	20 inches	1.35 per foot	8.50 each

No. 23

Height	Projection	Price	End Blocks
30 inches	18 inches	\$1.35 per foot	\$6.00 each

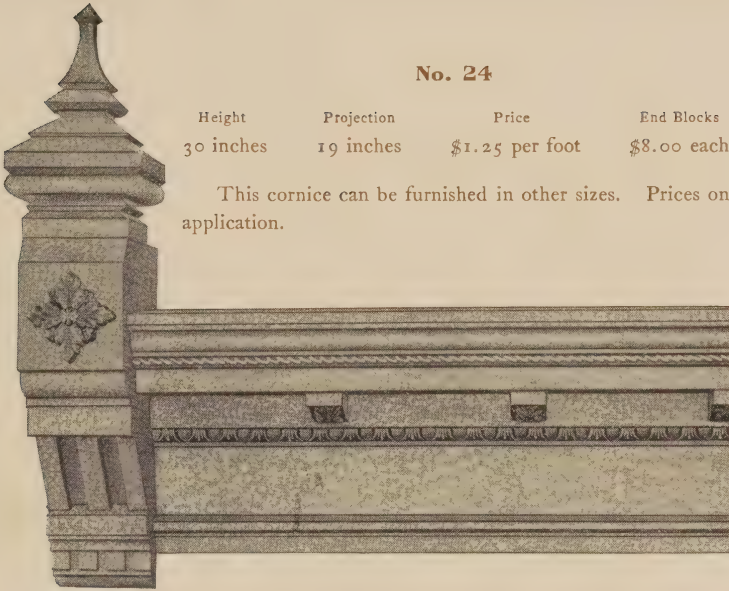
This cornice can be furnished in other sizes. Prices on application.



No. 24

Height	Projection	Price	End Blocks
30 inches	19 inches	\$1.25 per foot	\$8.00 each

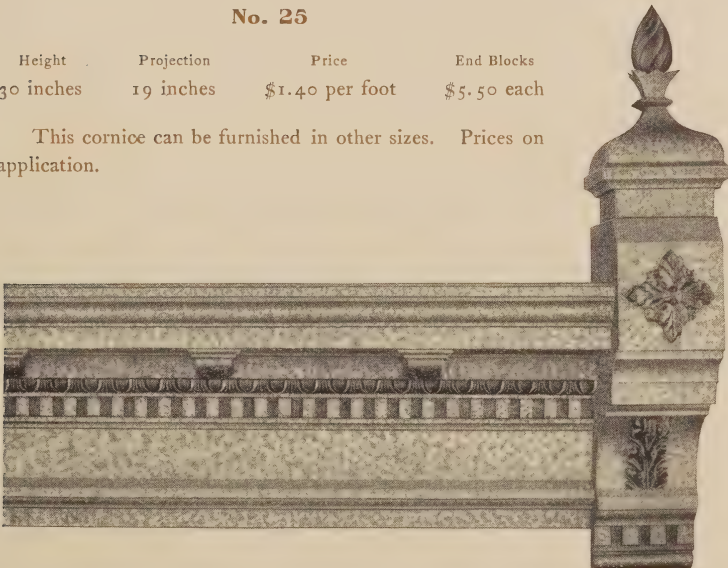
This cornice can be furnished in other sizes. Prices on application.



No. 25

Height	Projection	Price	End Blocks
30 inches	19 inches	\$1.40 per foot	\$5.50 each

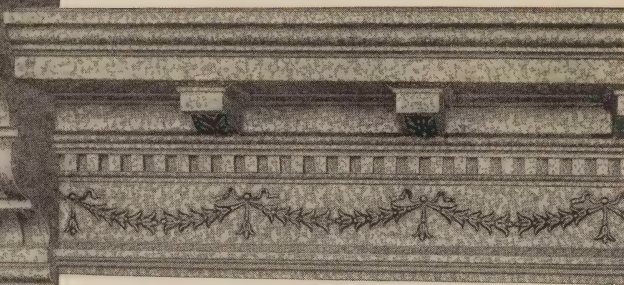
This cornice can be furnished in other sizes. Prices on application.



**No. 26**

Height	Projection	Price	End Blocks
30 inches	20 inches	\$1.50 per foot	\$7.50 each

This cornice can be furnished in other sizes. Prices on application.

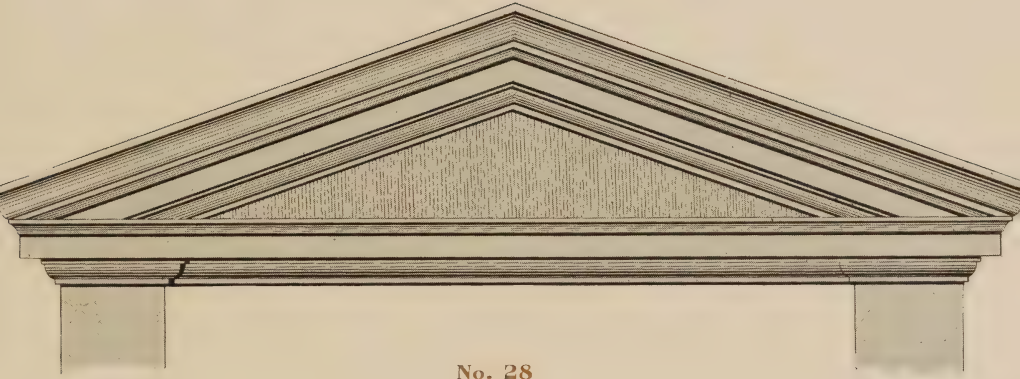
**No. 27**

Prices for No. 27 in order named are :

Height	Projection	Price	End Blocks
24 inches	14 inches	\$0.85 per foot	\$5.25 each
28 inches	14 inches	.95 per foot	5.50 each
30 inches	18 inches	1.10 per foot	6.00 each
36 inches	21 inches	1.25 per foot	6.50 each

The ornamentation on this cornice is so arranged that it may be continued an indefinite length.





No. 28



No. 29

Prices quoted according to size.



Chestnut Street Recreation Pier, Philadelphia. Ornamental Copper work by The Lupton Works



The deck of the Chestnut Street Recreation Pier, Philadelphia, was formed of No. 16 gauge special corrugated galvanized iron, 2 1/4-inch centers and 1 1/4-inch deep, with concrete topping—the first instance in which this method of flooring was ever employed. (1897)



Modeling Department, The Lupton Works, Showing model being developed for ornamentation of Hotel Dennis, Atlantic City



No. 30. Prices according to size

Photographed after being placed in position on building



Modelling Department, The Lupton Works. Showing ornament for hip of masted roof, Hotel Dennis, Atlantic City



No. 31. Octagon Bay Window
This design can be used for square windows also



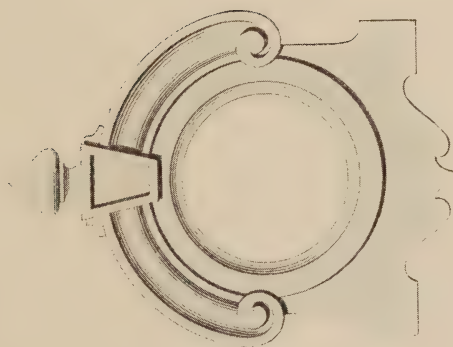
Race Street Recreation Pier, Philadelphia, Lupton ornamental copper work and special flooring as described on page 81



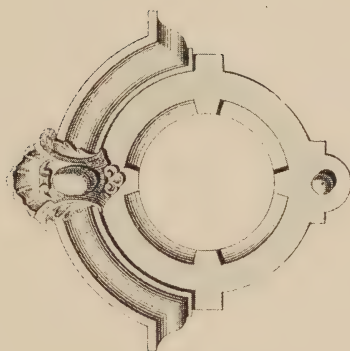
No. 32. Showing Oriel Window



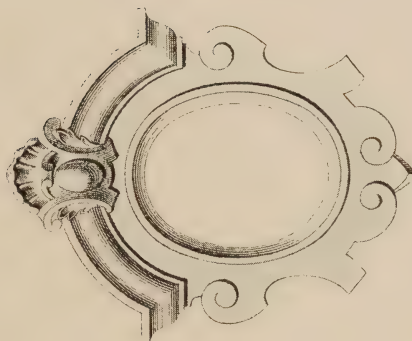
Elevator constructed of corrugated galvanized iron, with Lupton metal skylights on roof



No. 34

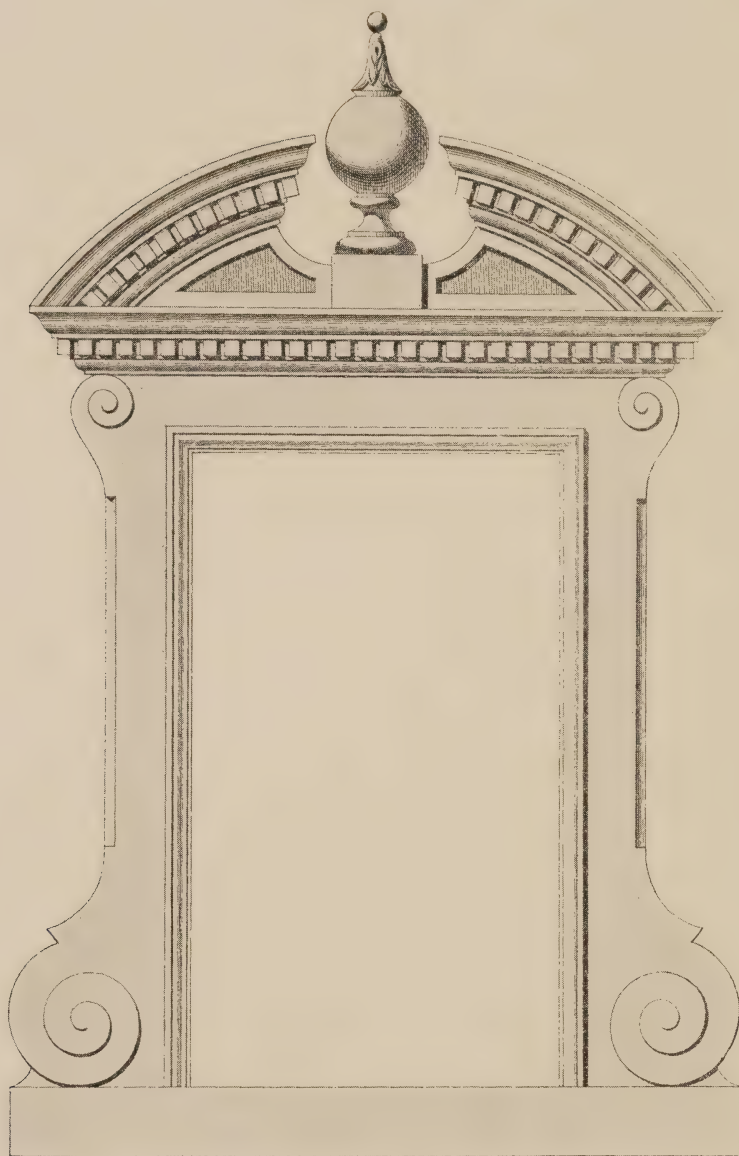


No. 36

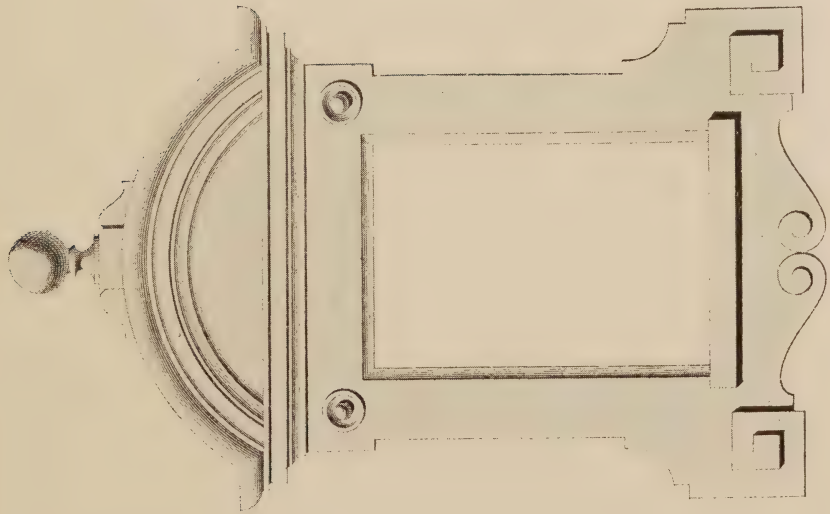
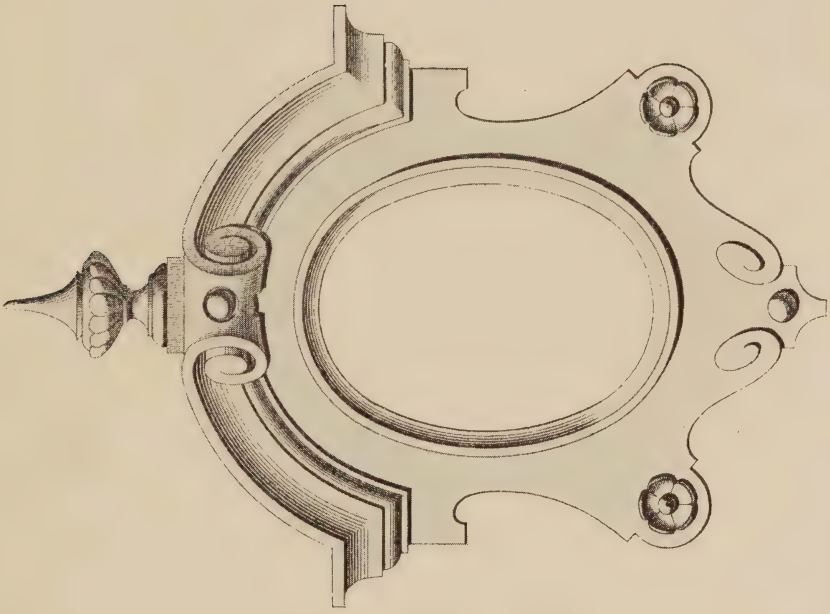


No. 37

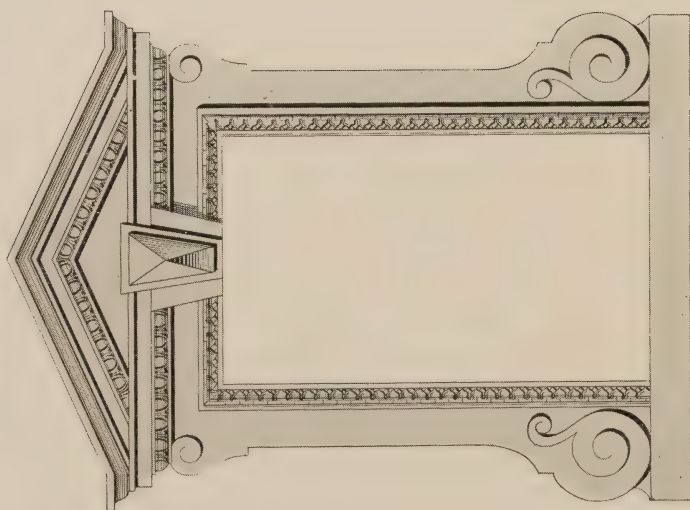
Dormer or Mansard Windows. Prices according to size

**No. 43**

Price according to size

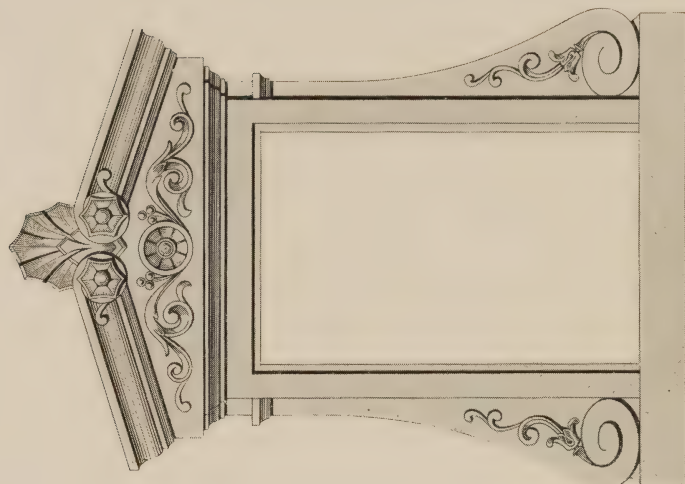


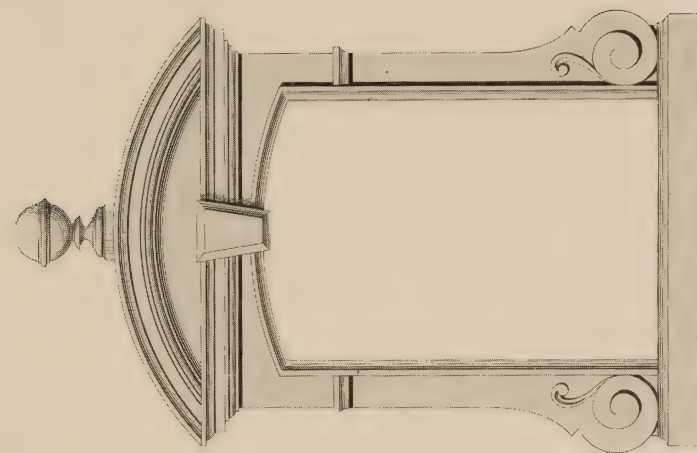
No. 38 Dormer or Mansard Windows. Prices according to size No. 35

**No. 40**

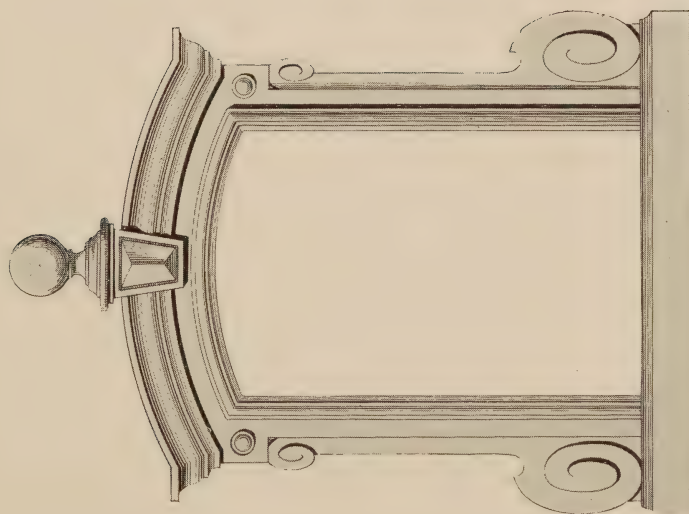
Dormer or Mansard Windows.

Prices according to size

**No. 39**



No. 42



No. 41.

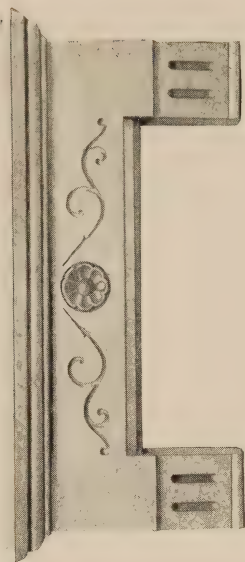
Dormer or Mansard Windows.

Prices according to size

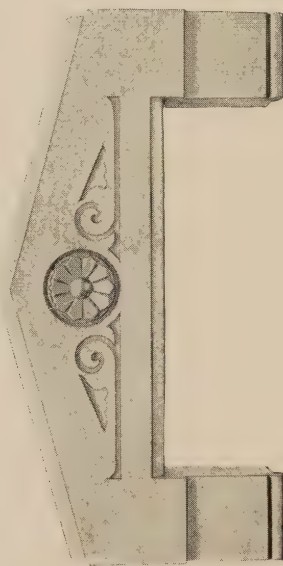
Window and Door Heads



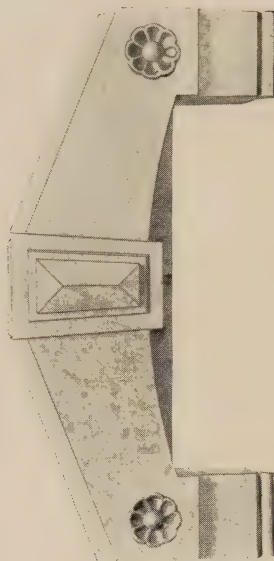
No. 44. \$3.00



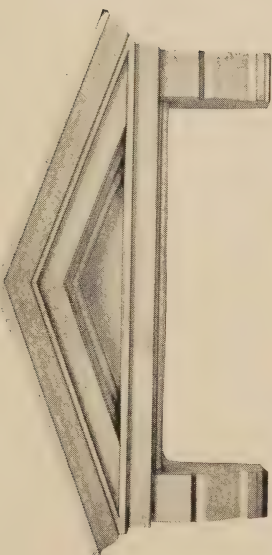
No. 46. \$5.00



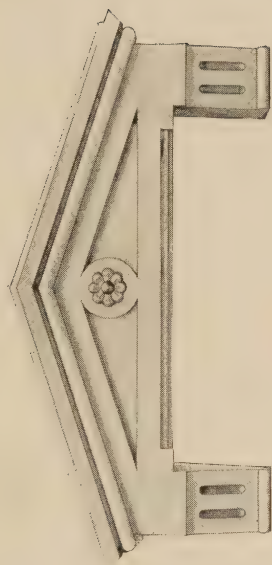
No. 45. \$4.50



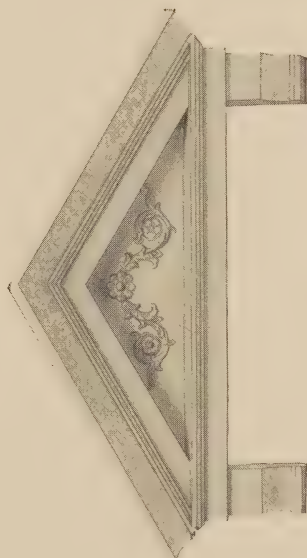
No. 47. \$4.50



No. 48. \$5.00



No. 50. \$5.50



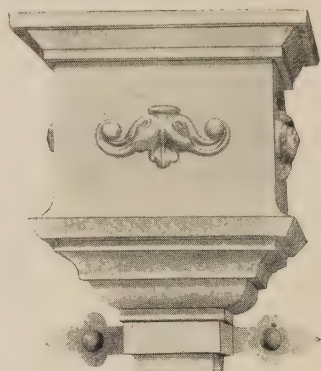
No. 49. \$5.50



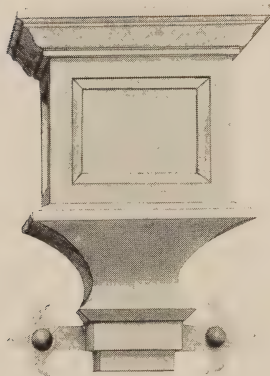
No. 51. \$5.00



No. 52. \$5.00



No. 53. \$3.00



No. 54. \$3.00

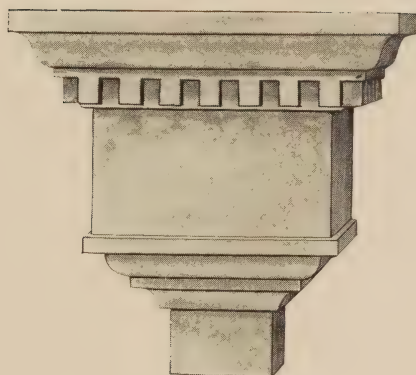


No. 55. \$5.50

Conductor Heads. Made of Galvanized Iron.

Prices for Copper quoted on application.

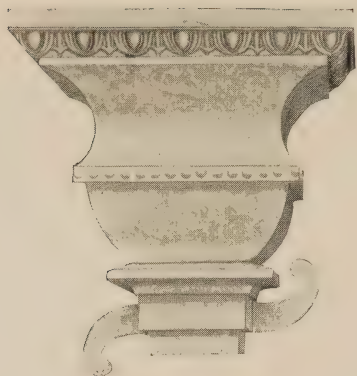
The above prices do not include the straps.



No. 56. \$3.00



No. 57. \$3.00



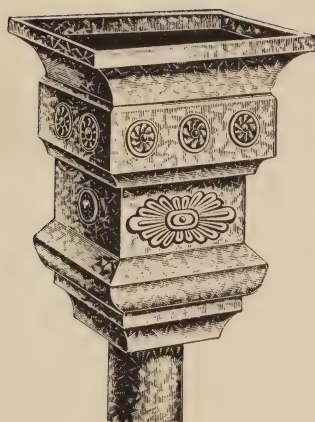
No. 59. \$3.50



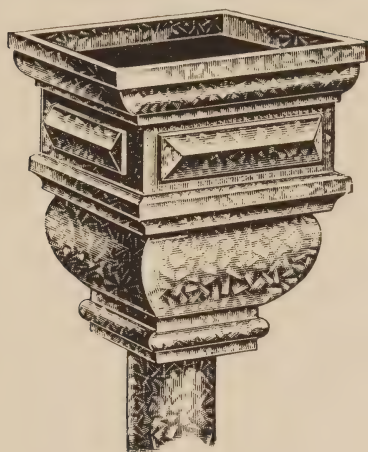
No. 58. \$3.50



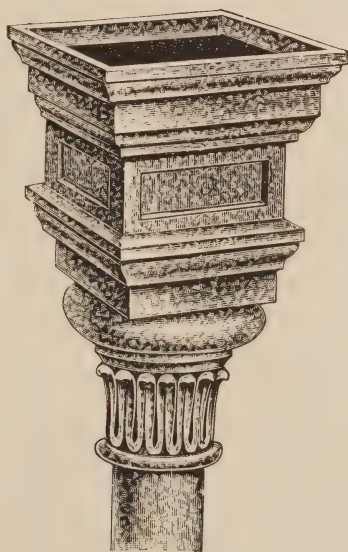
No. 60. \$3.75



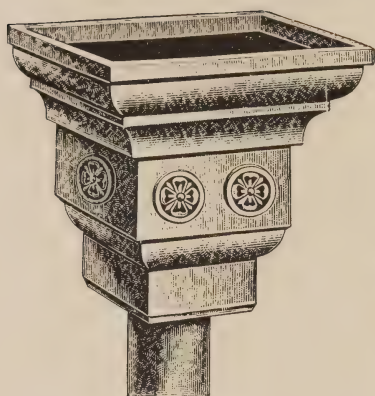
No. 61. \$4.50



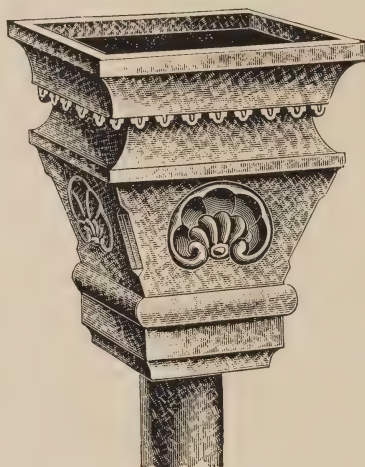
No. 64. \$5.50



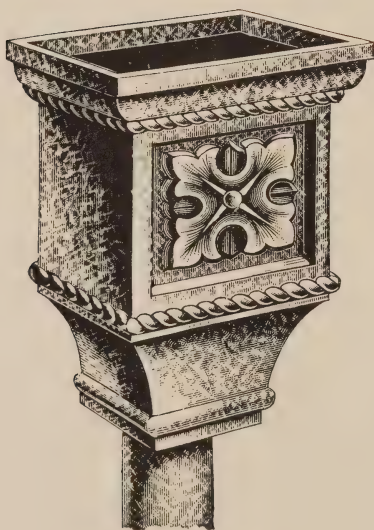
No. 69. \$8.00



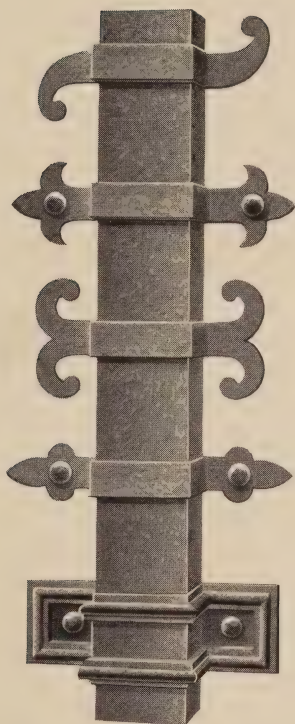
No. 66. \$3.00



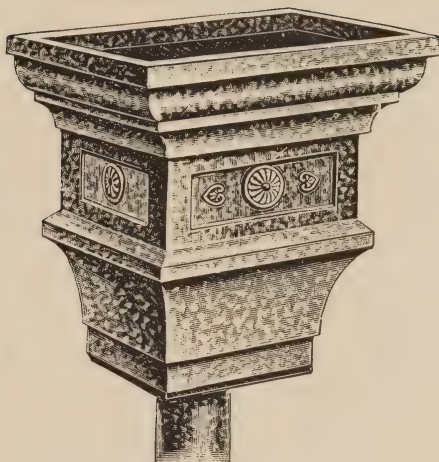
No. 67. \$5.00



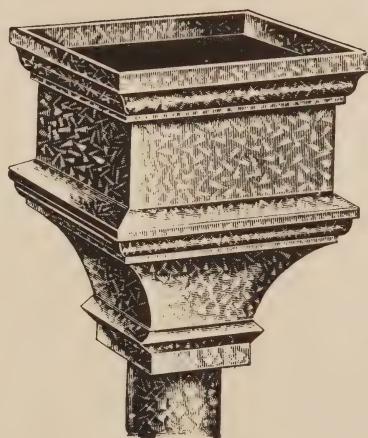
No. 65. \$4.00



No. 62



No. 68. \$4.50

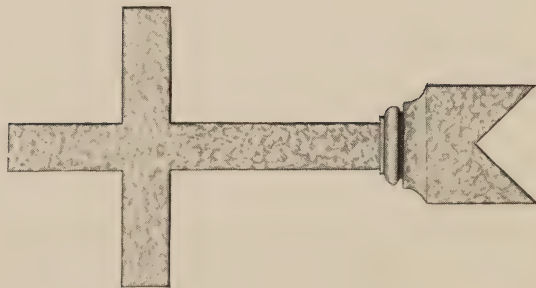
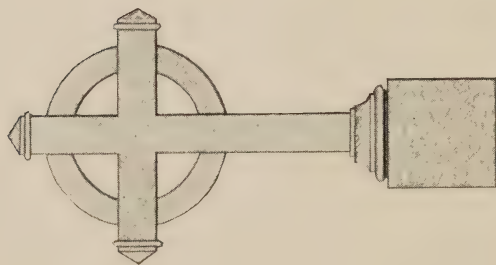
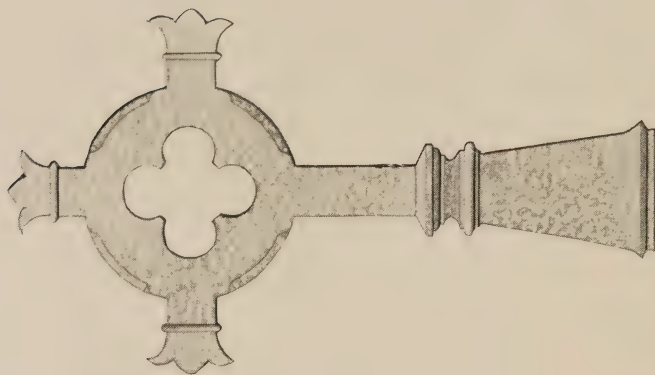


No. 63. \$3.00

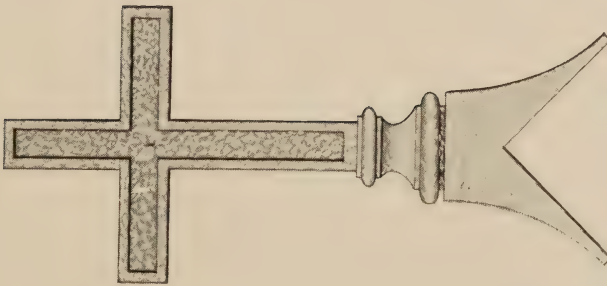
To fit Conductor Pipe of the following sizes :

	2 x 3	3 x 4	4 x 5	5 x 6
No. 62 A.	\$0.60	\$0.60	\$0.65	\$0.70
B.	.40	.40	.45	.50
C.	.60	.60	.65	.70
D.	.40	.40	.45	.50
E.	.80	.85	.95	1.00

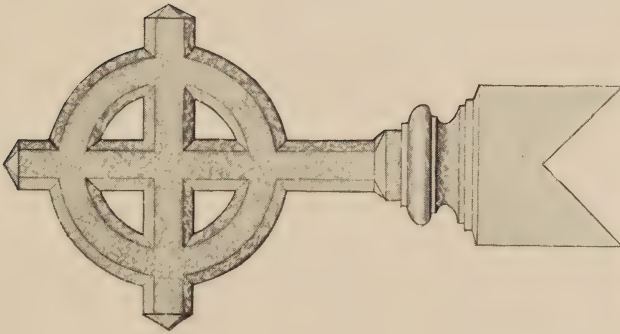
Crosses

**No. 107.** 5¼ feet high. \$10.00**No. 106.** 5½ feet high. \$15.00**No. 108.** 7 feet high. \$20.00

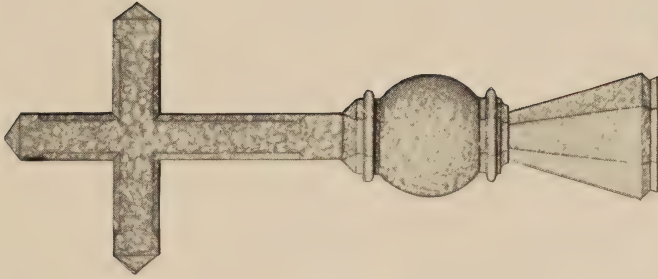
(Changes in size and design from standard bases will be charged extra)



No. 109. 6¾ feet high. \$15.00



No. 110. 6¾ feet high. \$20.00



No. 111. 7¼ feet high. \$22.00

Changes in size and design from standard bases will be charged extra

Finials

**No. 70**

3 feet high

\$12.00

**No. 71**

3 feet high

\$13.00

**No. 72**

3 1/2 feet high

\$8.00

**No. 73**

3 1/2 feet high

\$9.00

**No. 74**

3 3/4 feet high

\$14.00

**No. 75**

4 feet high

\$14.00

**No. 76**

4 feet high

\$18.00

**No. 77**

4 1/2 feet high

\$14.00

**No. 78**

4 1/2 feet high

\$14.00

Changes in size and design from standard bases will be charged extra



No. 79

4 ½ feet high

\$13.00



No. 80

5 feet high

\$12.00



No. 81

5 ½ feet high

\$22.00



No. 82

5 ½ feet high

\$18.00



No. 83

3 ½ feet high

\$12.00



No. 84

4 ¼ feet high

\$16.00



No. 85

4 ¼ feet high

\$13.00



No. 86

4 ½ feet high

\$10.00

Changes in size and design from standard bases will be charged extra



No. 87
4 $\frac{1}{4}$ feet high
\$9.00



No. 88
4 $\frac{1}{4}$ feet high
\$9.00



No. 89
4 $\frac{1}{4}$ feet high
\$12.00



No. 90
5 feet high
\$10.00



No. 91
5 feet high
\$15.00



No. 92
5 $\frac{1}{2}$ feet high
\$15.00



No. 93
6 feet high
\$18.00



No. 94
6 feet high
\$24.00



No. 95
6 $\frac{1}{4}$ feet high
\$24.00



No. 96
7 feet high
\$22.00

Changes in size and design from standard bases will be charged extra



No. 97
6 feet high. \$19.00



No. 98
6 1/4 feet high. \$15.00



No. 99
6 1/4 feet high. \$17.00



No. 100
6 1/4 feet high. \$20.00

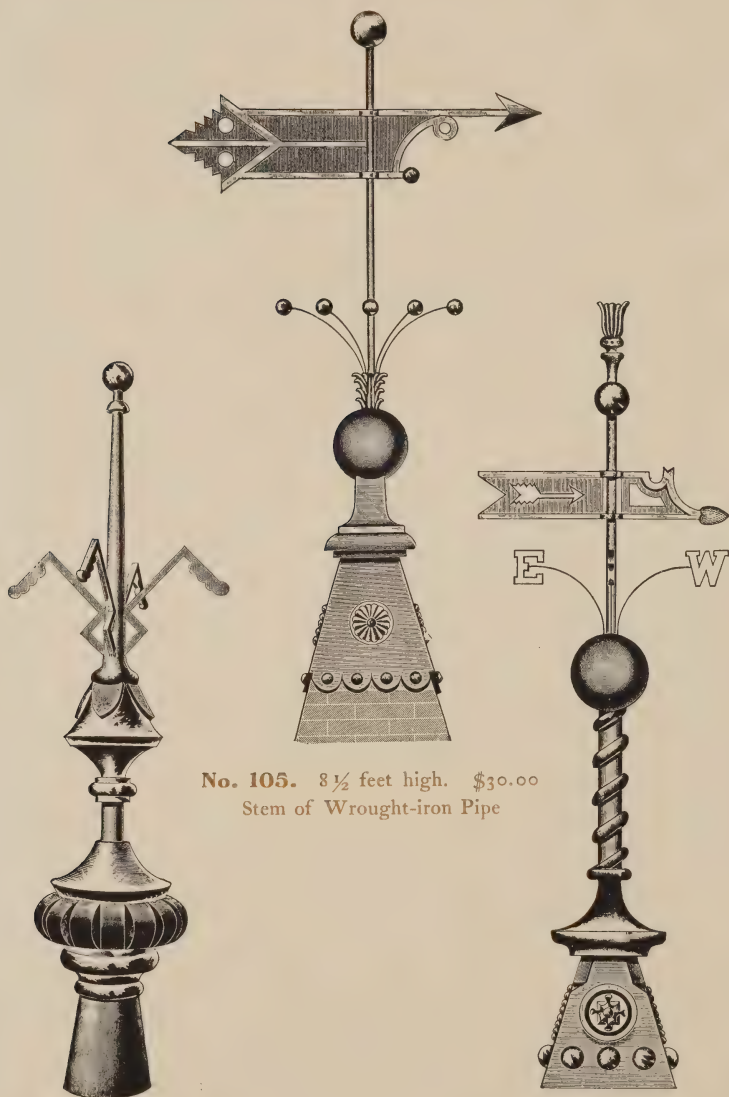


No. 101
7 1/4 feet high. \$20.00



No. 102
7 1/4 feet high. \$29.00

Changes in size and design from standard bases will be charged extra



No. 105. 8 ½ feet high. \$30.00
Stem of Wrought-iron Pipe

No. 104. 8 feet high.
\$31.00

No. 103. 8 feet high. \$27.00
Stem of Wrought-iron Pipe

Changes in size and design from standard bases will be charged extra



Union Trust Building, Pittsburgh
A Lupton operation, and one of the largest contrivances of its kind. A hundred tons of sheet copper used for roofing.



Lupton skylights in copper, Union Trust and, Fordbaugh

The Lupton Skylight Department

Skylights and domes. Any size, shape or design. Conservatories and greenhouses. Iron-and-glass buildings of every description.

Lupton skylight work is water-tight — always. The sashbars are galvanized iron, copper or brass. Glazed with hammered or rough plate, or ribbed glass; wired or not as desired. Provision is made for escape of condensation, without impairment of weather-proofness. Allowance is made for contraction and expansion, thus preventing breakage of glass. The skylights are constructed to support unusual weight, if need be, as a heavy snowfall.

Instructions for setting skylights

Curb or frame should be four to six inches above roof. Single and double pitch skylights should have pitch of at least two inches to foot. The pitch should be made in curb for single light; for hipped skylight the curb should always be level.

Glazing

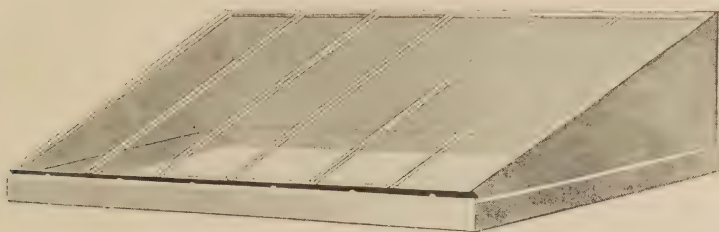
Form a bed on rebate of bar with putty. To give the glass level or even bearing, affording security against breakage, allow a space of at least one-eighth inch on each side of glass for expansion and contraction. The joints are covered with metallic caps saddling the bar, to which they are fastened.



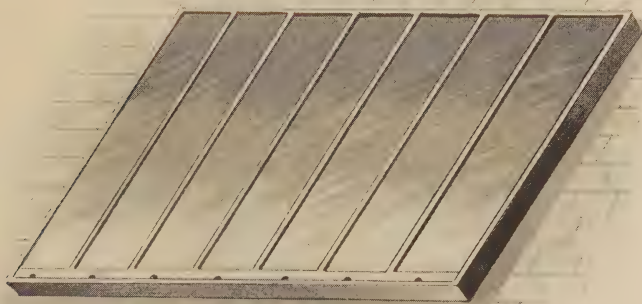
Lupton skylight, in copper, at the plant of the Wm. Cramp & Sons Ship and Engine Building Company, Philadelphia



No. 1. We recommend this skylight for lighting stair hallways. Dampers are not put in ventilator unless so ordered, for which there is an extra charge.



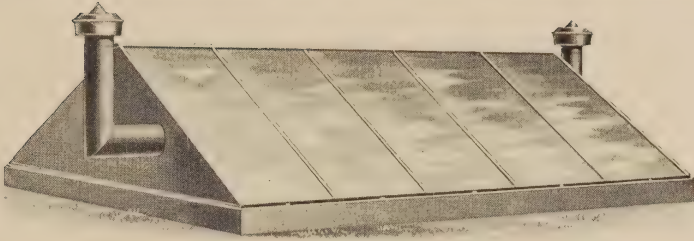
No. 2. The pitch in this skylight should be made in the wooden curb, except in case of small lights. Care should be taken to have the curb properly flashed



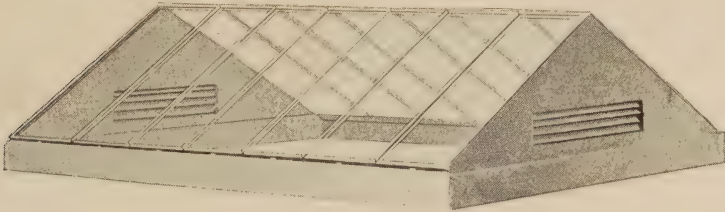
No. 3 shows application to roof and is set on curb with pitch of roof, the curb being flashed as it is in all other cases.



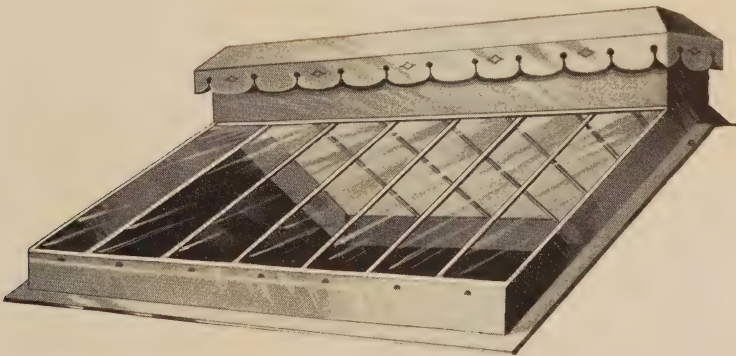
Lupton fire-proof skylights, galvanized iron glazed with wired glass. The Robert H. Foerderer Leather Works, Philadelphia



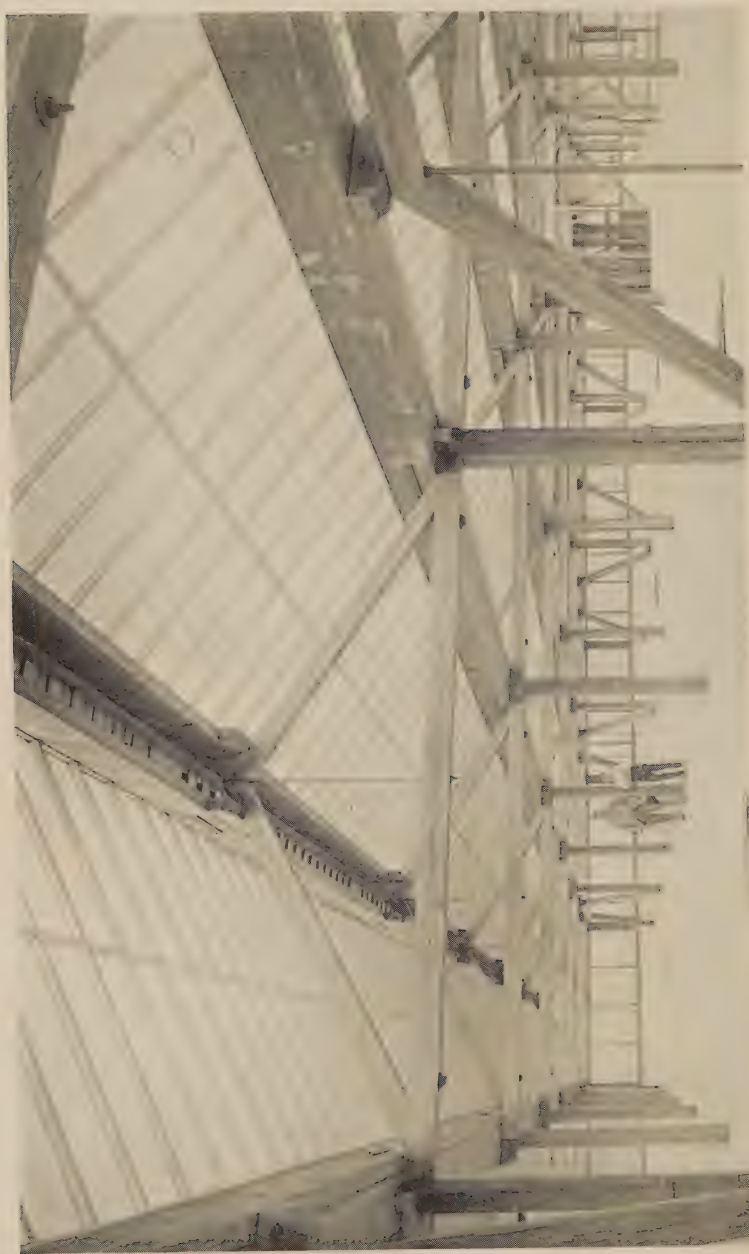
No. 5. Double pitch skylight, with tubular ventilators in ends. When damper is required for ventilation, state same in ordering, as there is an extra charge.



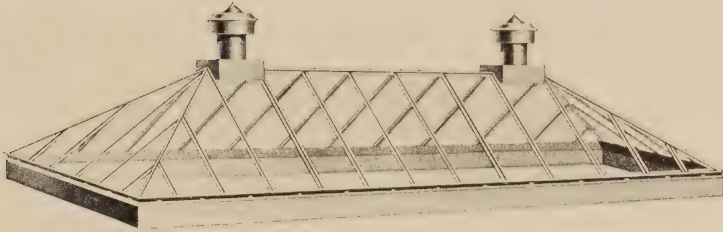
No. 6. Double pitch skylight, with stationary slats in each end. When movable slats are required to control ventilation, state same when ordering, for which there is an extra charge.



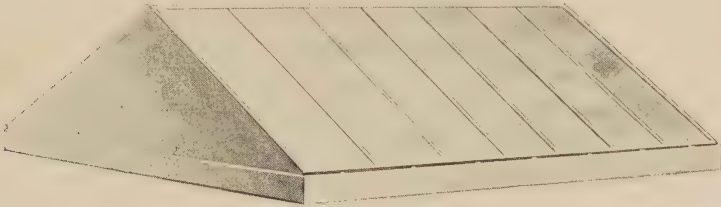
No. 4. Illustrating a skylight as applied to peak of roof, with ridge ventilator. The curb is made perpendicular, not at right angles with roof. Especially adapted for use on factories.



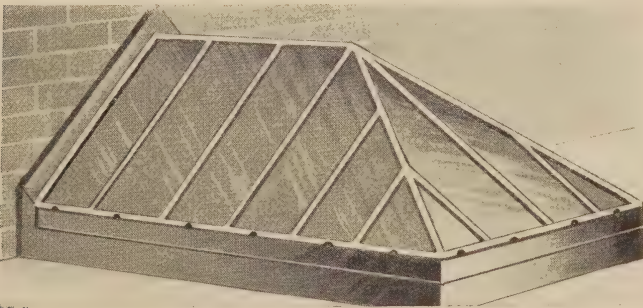
Lupton skylight, galvanized iron. Wolf Process Leather Co., Summerdale



No. 7. Hipped skylight, with tubular ventilators on ridge. This form of ventilation is especially desirable on a hipped skylight, giving the desired effect without obstructing the light.



No. 8. Double pitch skylight. The ends are of galvanized iron up to three or four feet wide. If wider, the curb should be formed of the same material as the roof and covered in the same manner, the skylight setting over the curb.

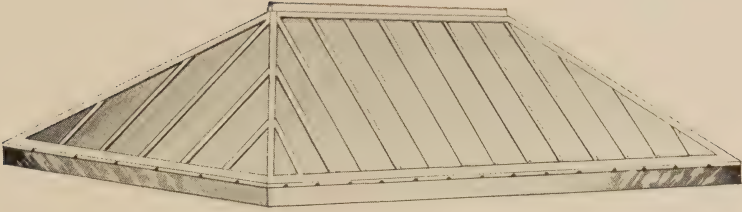


No. 9. Skylight hipped on three sides ; the other joining wall, to which it is securely flashed.

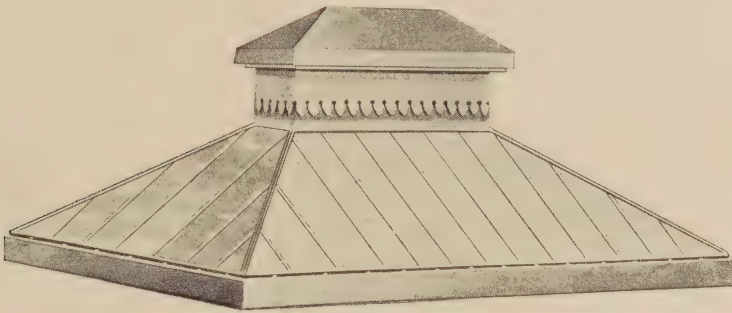


BALLINGER & PERROT, Architects

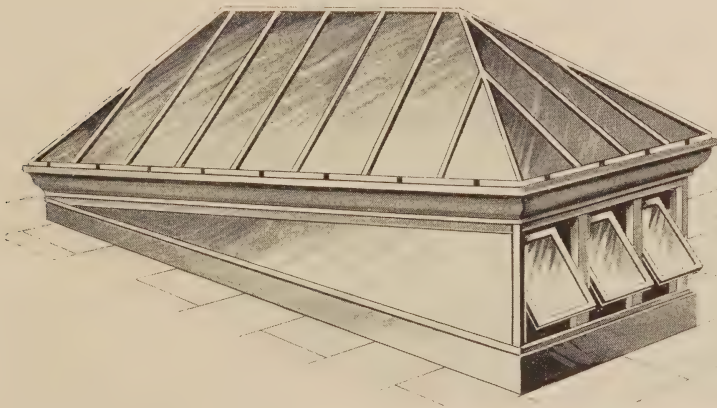
The Oldman Mills, Philadelphia. Lupton copper cornice work, galvanized iron skylights, tin roofing and ventilators



No. 11. Plain hipped skylight, without ventilator.



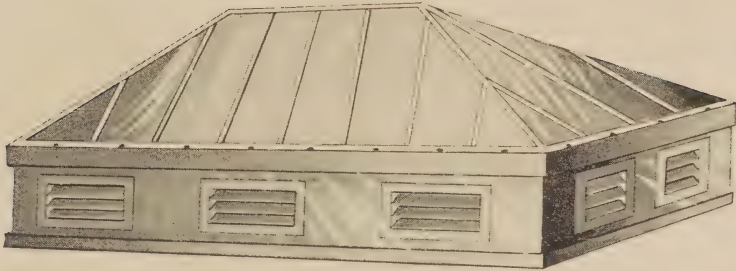
No. 12. Hipped skylight, with ridge ventilator. Dampers are not placed in ventilators on small-sized skylights.



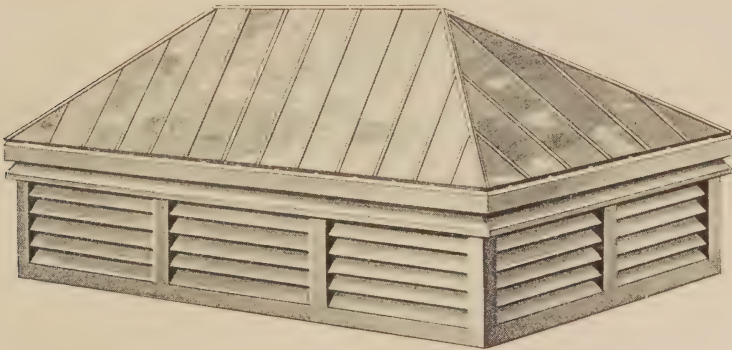
No. 10. Hipped skylight, with opening sash on front and self-locking apparatus, which is operated from floor below.
Especially desirable for use in lighting and ventilating attic rooms.



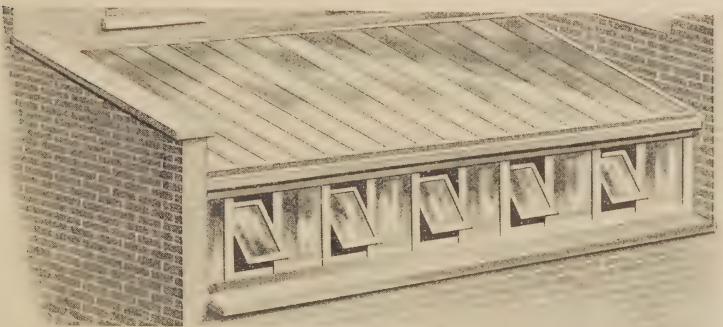
Weaving sheds—The Oldham Mills. Lupton skylights, tin roofing, and ventilators



No. 13. Hipped skylight set on a high wooden curb, the sides being flashed to the top edge, the ventilation being out through the curb, and operated with cords from below.



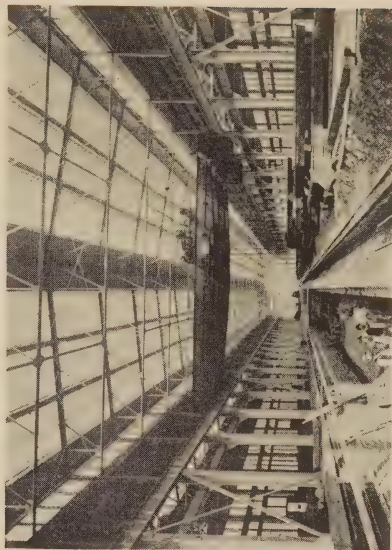
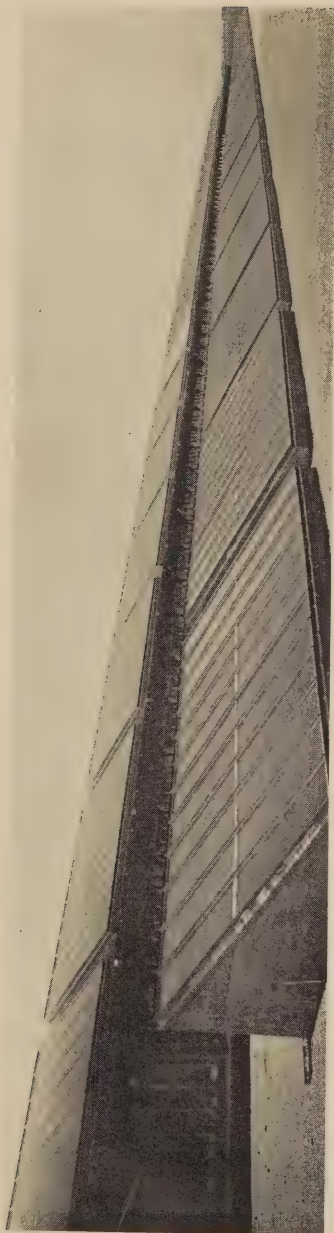
No. 14. Skylight well adapted for use on boiler-rooms, factories, stables, dye-houses, etc. If desired, movable slats can be furnished to control ventilation, for which there is an extra charge.



No. 17. Skylight in position in area-way or rear of building. The movable sash makes it possible to ventilate the room, which is a very desirable feature.



The Schickel, Jute Cordage Company, Philadelphia. 3500 square feet of Lupton skylights, galvanized iron. This skylight covers a large area-way between two buildings. The structural iron supports are also Lupton work.



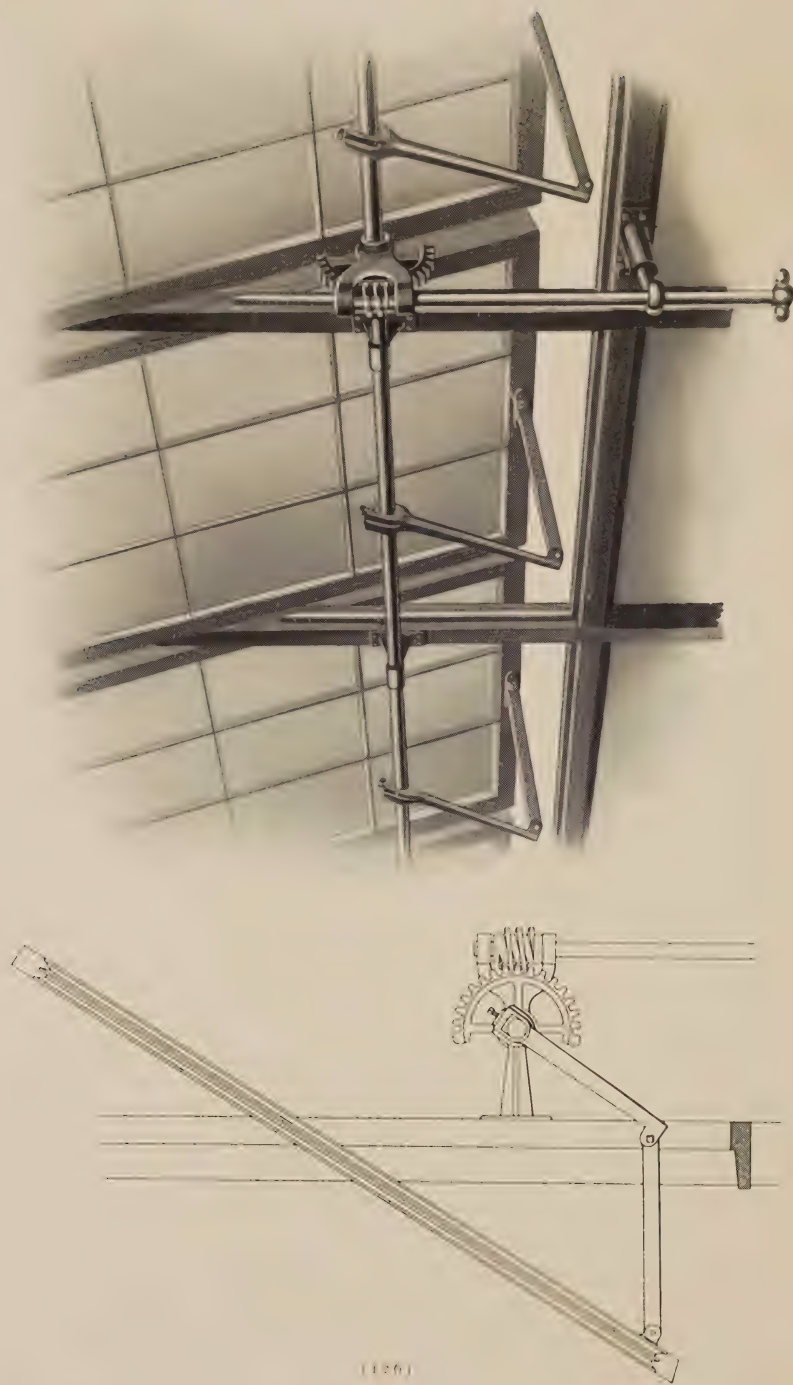
Twelve thousand seven hundred and fifty (12,750) square feet of Lupton Skylights in the locomotive shops of the Pennsylvania Railroad's Car Erecting Shops, Wilmington, Del. All glazed with wired glass.



Paint shops of the Pennsylvania Railroad's Car
Erecting Shops, Wilmington, Del. 58,000 square
feet of Lupton Skylights, requiring 106,000 square
feet of wired glass. 336 No. 20 G. I. ventilators
2 feet in diameter, designed and made by Lupton.
Flashings and gutters made of sheet copper.



Reading Car Shops, Reading, Pa. 10,000 square feet of Lupton Skylights in this shop.
All metal cornices and sheet-metal work are Lupton products.



Detail and general view. The Lupton Skylight Gearing

The Lupton Skylight Gearing

is distinguished for ease of operation, and dependability—the certainty of working without a hitch.

Simplicity and strength have been thoroughly developed, with the further advantages of compactness and sightliness.

The Lupton castings are superior to those commonly turned out for sash-regulating apparatus. Well-designed, clean, strong and good-looking. Parts subject to special strain are malleable iron; other parts, the best grey iron. Extra metal has been put wherever extra strength is needed. Each part has ample weight to insure rigidity and proper performance of its work. The lifting-power gears are accurately fitted.

The Lupton fixtures are readily erected, without the employment of machinists; and when erected can be depended upon to work the sash easily and surely.

Comparisons are invited, in quality, weight and price, with any sash-opening apparatus on the market.

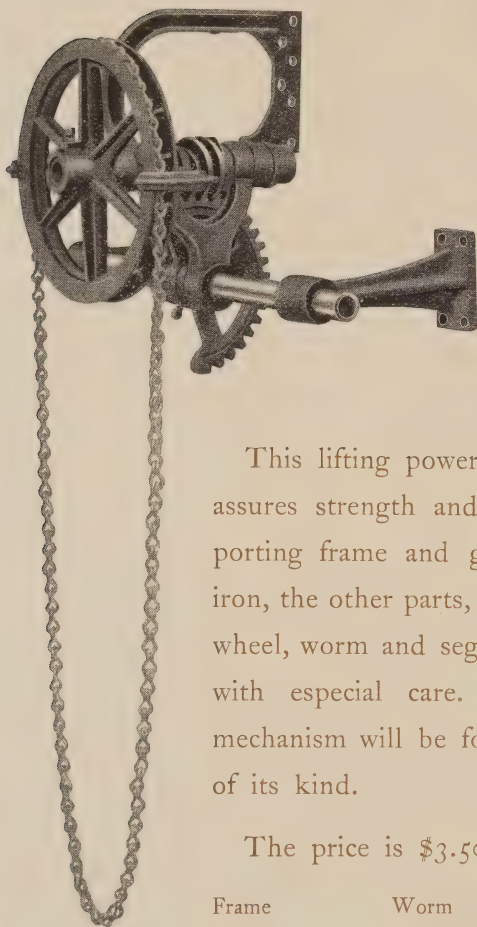
David Lupton's Sons Company

New York

Philadelphia

Detroit

The Lupton lifting power for inch pipe

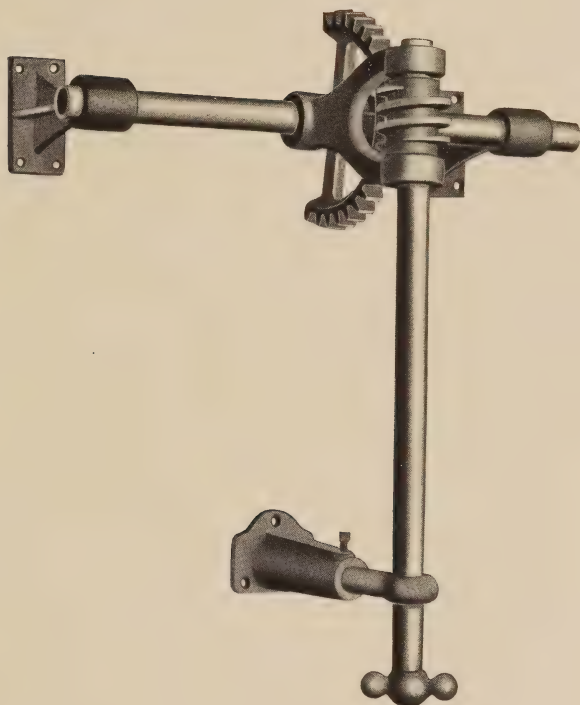


This lifting power is of a design that assures strength and power. The supporting frame and guides are malleable iron, the other parts, best grey iron. The wheel, worm and segment gear are made with especial care. As a whole this mechanism will be found to be the best of its kind.

The price is \$3.50, including—

Frame	Worm	Segment Gear
Yoke	Chain Guides	Chain Sheave

Cost of chain depends upon the length required.

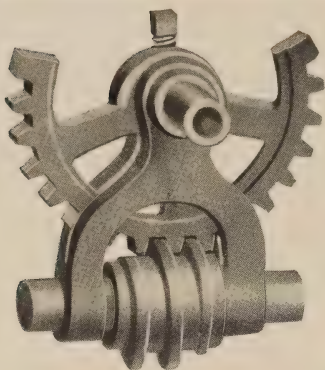


The lifting power here illustrated is made both for inch pipe and for half-inch pipe.

Prices: For inch pipe, ... \$1.34

For half-inch pipe, ...62

These prices are for the lifting power alone. For prices for extension, brackets and handle, see price-list on the pages following.



Lifting power
For inch or for half-inch pipe



Arms for inch pipe
Two sizes: No. 20D, 12-inch; No. 20C, 9-inch



No. 11
Collar
Inch or half-inch

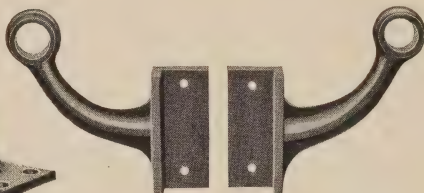
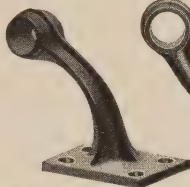


Arms for half-inch pipe
Three sizes:
No. 20E, 12-inch; No. 20C, 9-inch; No. 20A, 5½-inch



Brackets for inch pipe

Three sizes:
No. 2C, 12-inch; No. 2B, 9-inch; No. 2A, 6-inch



Brackets for half-inch pipe

Four sizes in face brackets:
No. 22C, 14-inch; No. 22B, 10-inch;
No. 22D, 4-inch; No. 22F, 3½-inch

Right and left
No. 22, 3½-inch



Hinge for inch
fixtures



Hinge for half-
inch fixtures



No. 3
Handle



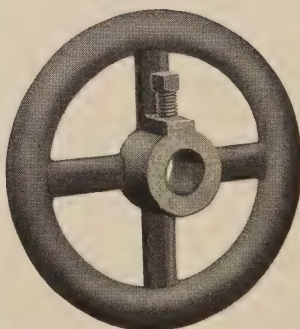
No. 9
Pole hook



No. 23
Universal joint
For inch or half-inch pipe



No. 17
Extension
For inch or
half-inch pipe



Hand-wheel
Two sizes for half-inch pipe:
No. 5, 9-inch; No. 5A, 6-inch
For inch pipe, 9¾-inch

Prices of The Lupton Skylight Gearing

For half-inch pipe :

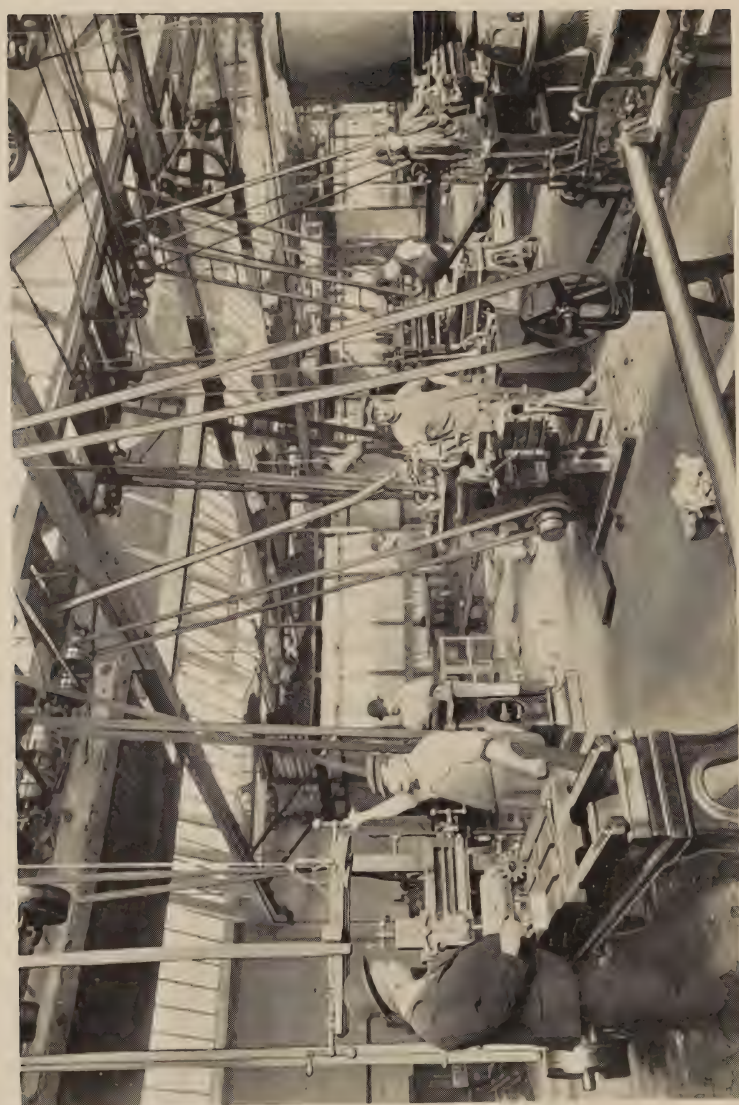
Lifting power, ...	\$0.62
Collar, ...	.10
Arms, No. 20 E, 12"	.22
No. 20 C, 9"	.20
No. 20 A, 5 $\frac{1}{4}$ "	.18
Brackets, No. 22 C, 14" . . .	.46
No. 22 B, 10"	.34
No. 22 D, 4"	.12
No. 22 F, 3 $\frac{1}{2}$ "	.12
Handle, ...	.10
Universal joint, ...	.48
Hinge, ...	.04
Pole hook, ...	.14
Extension, ...	.34
Hand-wheel, 6"	.34
9"	.44
Mitre-gears, each, ...	.24

For one-inch pipe :

Lifting power, ...	\$1.34
Collar, ...	.14
Arms, No. 20 D, 12"	.44
No. 20 C, 9"	.36
Brackets, No. 2 C, 12" . . .	.54
No. 2 B, 9"	.50
No. 2 A, 6"	.40
Handle, ...	.18
Universal joint, ...	.64
Hinge, ...	.05
Pole hook, ...	.18
Extension, ...	.62
Hand-wheel, 9 $\frac{1}{2}$ "	.80
Mitre-gears, each, ...	.50

Quantity discounts quoted on request.

Connections and pipe furnished when desired.



The Lupton Machine Shop

is one of the important links between flat material and finished product.

Here the innumerable tools and tool parts, required by the wide variety and volume of sheet-metal work done in the Lupton plant, are kept in condition.

Not only so, but new tools are promptly made when new requirements arise.

It furnishes another illustration of the completeness of the equipment of The Lupton Works.

David Lupton's Sons Company

New York

Philadelphia

Detroit



Conductor-pipe shop, The Lupton Works

The Lupton Conductor-pipe

has a standard in its class as high as Lupton Windows and Lupton Architectural Sheet-metal Work.

It is always true to size and in every other way reliable.

Made of galvanized sheet steel, galvanized charcoal iron, or sheet copper.

Ten foot lengths, in a wide range of sizes and gauges.

David Lupton's Sons Company

New York

Philadelphia

Detroit



Round corrugated conductor-pipe



Plain round conductor-pipe



Square corrugated conductor-pipe



Plain square conductor-pipe

List prices adopted March 1, 1906

Round Corrugated Pipe

Galvanized Steel and Galvanized Charcoal Iron

Regular Gauges

Size, Inches, ...	2	3	4	5	6
Standard, ...	\$0 13	\$0 15	\$0 20	\$0 25	\$0 30
No. 26, ...	19	21	26	31	36
No. 24, ...	25	27	32	37	42

Plain Round Pipe

Galvanized Steel and Galvanized Charcoal Iron

Regular Gauges

Size, Inches, ...	1½	2	2½	3	3½	4	5	6
Standard, ...	\$0 11	\$0 13	\$0 14	\$0 15	\$0 18	\$0 20	\$0 25	\$0 30
No. 26, ...	17	19	20	21	24	26	31	36
No. 24, ...	23	25	26	27	30	32	37	42

Plain Round and Round Corrugated Pipe

Galvanized Charcoal Iron

Irregular Sizes and Gauges

Per Lineal Foot

Size, Inches, ...	3	4	5	6	7	8	9	10
28 G, ...					\$0 93	\$1 07	\$1 20	\$1 35
26 G, ...					1 00	1 13	1 27	1 42
24 G, ...					1 18	1 30	1 45	1 60
22 G, ...	\$0 80	\$0 93	\$1 05	\$1 20	1 24	1 36	1 50	1 66
20 G, ...	90	1 03	1 15	1 30	1 34	1 46	1 60	1 76

Corrugated not made larger than 6 inch

Plain Round and Round Corrugated Pipe

Galvanized Steel

Irregular Sizes and Gauges

Per Lineal Foot

Size, Inches, ...	3	4	5	6	7	8	9	10
28 G, ...					\$0 70	\$0 80	\$0 90	\$1 00
26 G, ...					76	86	96	1 06
24 G, ...					94	1 04	1 14	1 24
22 G, ...	\$0 60	\$0 70	\$0 80	\$0 90	1 00	1 10	1 20	1 30
20 G, ...	70	80	90	1 00	1 10	1 20	1 30	1 40

Corrugated not made larger than 6 inch

List prices adopted March 1, 1906

Square Corrugated Pipe—Standard

Galvanized Steel and Galvanized Charcoal Iron

Sizes, ...	{ 2 inches 1 $\frac{3}{4}$ x 2 $\frac{1}{4}$		3 inches 2 $\frac{1}{4}$ x 3 $\frac{1}{4}$	4 inches 2 $\frac{3}{4}$ x 4 $\frac{1}{4}$	5 inches 3 $\frac{1}{2}$ x 5
Standard, ...	\$0 14		\$0 16	\$0 21	\$0 26
No. 26, ...	20		22	27	32
No. 24, ...	26		28	33	38

Plain Square Pipe—Irregular

Galvanized Steel

PER LINEAL FOOT

Size, Inches, ...	2 x 3	2 x 4	2 $\frac{1}{2}$ x 4	3 x 4	3 $\frac{1}{2}$ x 5	4 x 5	4 x 6
28 Gauge, ...	\$0 25	\$0 30	\$0 32	\$0 35	\$0 42	\$0 45	\$0 50
26 Gauge, ...	31	36	38	41	48	51	56
24 Gauge, ...	49	54	56	59	66	69	74
22 Gauge, ...	55	60	62	65	72	75	80
20 Gauge, ...	65	70	72	75	82	85	90

Plain Square Pipe—Irregular

Galvanized Charcoal Iron

PER LINEAL FOOT

Size, Inches, ...	2 x 3	2 x 4	2 $\frac{1}{2}$ x 4	3 x 4	3 $\frac{1}{2}$ x 5	4 x 5	4 x 6
28 Gauge, ...	\$0 34	\$0 40	\$0 44	\$0 47	\$0 56	\$0 60	\$0 67
26 Gauge, ...	41	48	51	55	64	68	75
24 Gauge, ...	55	62	75	79	88	92	1 00
22 Gauge, ...	73	80	83	87	96	1 00	1 07
20 Gauge, ...	87	93	94	1 00	1 09	1 14	1 20

List prices adopted March 1, 1906

Cold Rolled Copper Pipe

Round Corrugated

Sizes, Inches, ...	2	3	4	5	6
14 ounce, ...	\$0 40	\$0 50	\$0 65	\$0 85	\$1 00
16 ounce, ...	43	54	70	92	1 08
20 ounce, ...	54	67	88	1 15	1 35

Cold Rolled Copper Pipe

Square Corrugated

Sizes, ...	{ 2 inches 1 $\frac{3}{4}$ x 2 $\frac{1}{4}$	3 inches 2 $\frac{1}{4}$ x 3 $\frac{1}{4}$	4 inches 2 $\frac{3}{4}$ x 4 $\frac{1}{4}$	5 inches 3 $\frac{1}{2}$ x 5
14 ounce, ...	\$0 42	\$0 52	\$0 67	\$0 87
16 ounce, ...	45	56	72	94
20 ounce, ...	56	70	90	1 18

Cold Rolled Copper Pipe

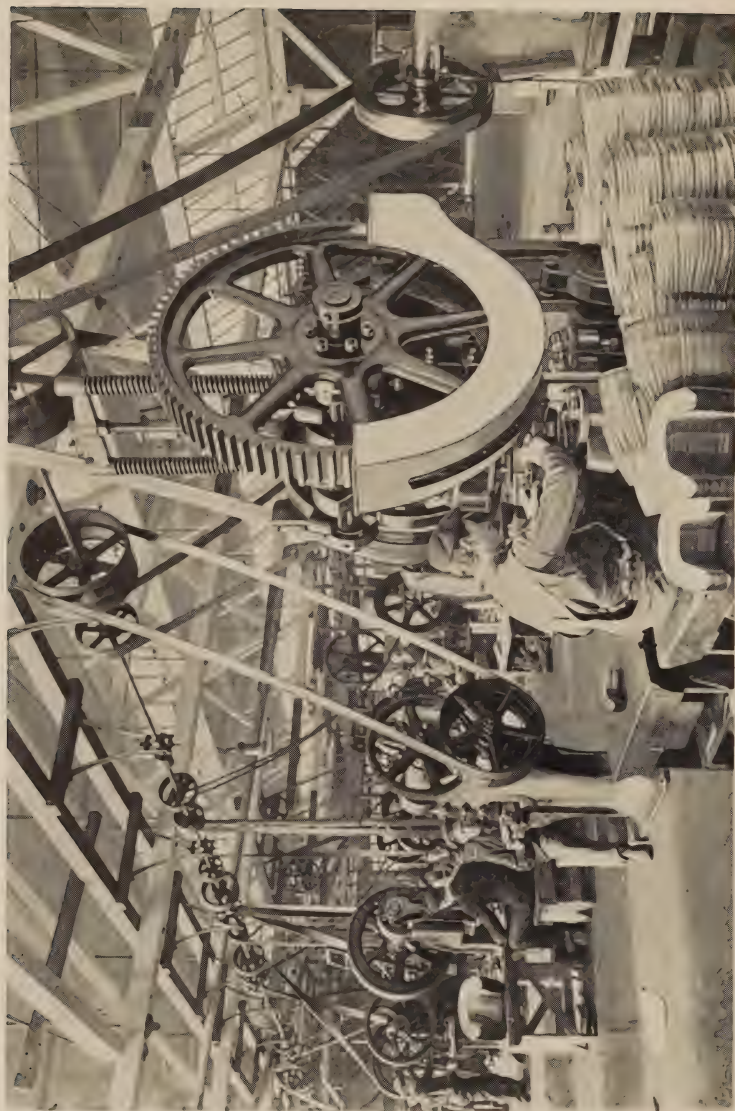
Plain Round

Sizes, Inches, ...	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4	5	6
14 ounce, ...	\$0 40	\$0 40	\$0 50	\$0 50	\$0 65	\$0 65	\$0 85	\$1 00
16 ounce, ...	43	43	54	54	70	70	92	1 08
20 ounce, ...	54	54	67	67	88	88	1 15	1 35

Cold Rolled Copper Pipe

Square Plain—Irregular

Size, Inches, ...	2 x 3	2 x 4	3 x 4	3 $\frac{1}{2}$ x 5	4 x 5	4 x 6
14 ounce, ...	\$0 60	\$0 71	\$0 84	\$1 00	\$1 07	\$1 18
16 ounce, ...	63	75	88	1 05	1 13	1 25
20 ounce, ...	79	95	1 10	1 30	1 42	1 55

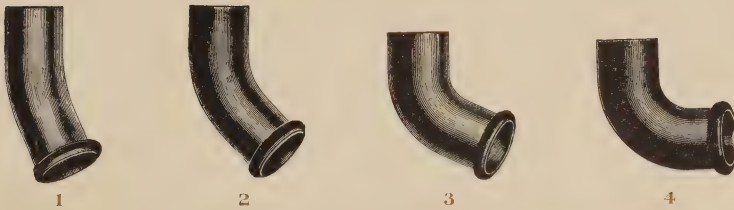


Making elbows for Lupton conductor-pipe

Round Plain Elbows



Round Plain Shoes



	Galvanized Steel		Galvanized Charcoal Iron	
	Elbows	Shoes	Elbows	Shoes
1½ inch, ...	\$0 25	\$0 30	\$0 38	\$0 45
2 "	25	30	38	45
2½ "	30	36	45	54
3 "	30	36	45	54
4 "	40	48	60	72
5 "	60	72	90	1 08
6 "	72	86	1 08	1 30

Round Corrugated Elbows



Round Corrugated Shoes



Round Corrugated Elbows and Shoes are made only in even inch sizes.



A portion of conductor-pipe elbow warehouses, The Lupton Works

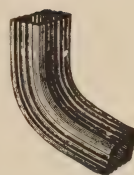
Square Corrugated Elbows



1



2



3

Square Corrugated Shoes



1

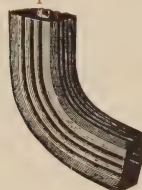


2



3

Right and Left Square Elbows



Made in No. 2 and No. 3 angle

	Galvan. Steel		Galv. C. C. Iron	
	El.	Sh.	El.	Sh.
2 inch, ...	\$0 40	\$0 48	\$0 60	\$0 72
3 "	45	54	67	81
4 "	60	72	90	1 08
5 "	90	1 08	1 35	1 62

Price-List of Elbows and Shoes in Copper

	Cop. Elbows, Nos. 1, 2, 3						Cop. Sh. and No. 4 Cop. Elb.					
	Rd. Corr.		Pl. Round		Sq. Corr.		Rd. Corr.		Pl. Round		Sq. Corr.	
	14 oz.	16 oz.	14 oz.	16 oz.	14 oz.	16 oz.	14 oz.	16 oz.	14 oz.	16 oz.	14 oz.	16 oz.
1½ inch, ...			\$0 70	\$0 75	\$0 75				\$0 75	\$0 85		
2 "	\$0 70	\$0 75	70	75	\$0 85	\$0 90	\$0 75	\$0 85	75	85	\$0 90	\$1 05
2½ "			90	1 00					1 00	1 10		
3 "		90	1 00	90	1 10	1 20	1 00	1 10	1 00	1 10	1 20	1 35
4 "		1 35	1 50	1 35	1 50	1 60	1 50	1 65	1 50	1 65	1 80	2 00
5 "		2 00	2 25	2 00	2 25	2 40	2 25	2 50	2 25	2 50	2 75	3 00
6 "		2 85	3 15	2 85	3 15		3 15	3 50	3 15	3 50		



Round Corrugated Hinged Hooks

Short and long drives for wood

PER 100, TINNED

Inches, ...	2	3	4	5	6
Short for wood, . . .	\$3 00	\$4 00	\$5 00		
Long for wood, . . .	3 50	4 50	5 50	\$7 50	\$8 50

For extra long drives, see Adjustable Hook below.



Round Corrugated Hinged Hooks

For brick

PER 100, TINNED

Inches, ...	2	3	4	5	6
For brick, ...	\$3 50	\$4 50	\$5 50	\$7 50	\$8 50



Plain Round Hinged Hooks

PER 100, TINNED

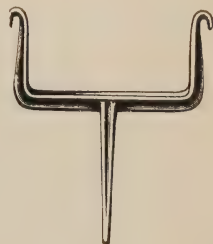
Inches, .	2	3	4	5	6
For wood, \$	3 00	\$4 00	\$5 00	\$7 50	\$8 50
For brick, .	3 50	4 50	5 50	7 50	8 50

Round and Square Wired Hooks



For wood.	PER 100, TINNED				
Inches, .	2	3	4	5	
Square, .	\$2 00	\$2 50	\$3 00	\$3 50	
Round, .	1 50	2 00	2 50		

For brick.	PER 100, TINNED				
Inches, .	2	3	4	5	
Square, .	\$2 50	\$3 00	\$3 50	\$4 00	
Round, .	2 50	3 00	3 50		



The Lupton Eaves-trough

is made without the edge projecting inside of bead, found in others. Also with bead *undercut*; not overcut as are others.



Lupton—No obstruction in bead



Lupton—Bead undercut



The troublesome way—With projecting edge



The troublesome way—Bead overcut

Being undercut, the Lupton bead leads the bead of adjoining trough into place. Having no inside obstructing edge, the bead of one trough easily enters the other.

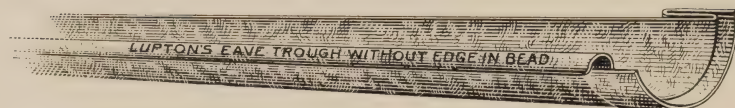
Advantages none other has; and appreciated by mechanics in erecting, especially where work is done above the head.

David Lupton's Sons Company

New York

Philadelphia

Detroit



Eaves-trough

in ten-foot lengths, without cross-seams

Galvanized Steel and Galvanized Charcoal Iron

Single Bead, Lap Joint

Size, Inches, ...	3	3½	4	4½	5	6	7	8	9	10
Standard G, ...	\$0 13	\$0 14	\$0 16	\$0 18	\$0 19	\$0 23	\$0 27	\$0 30	\$0 36	\$0 40
26 G, ...	19	20	22	24	25	29	33	36	42	46
24 G, ...	25	26	28	30	31	35	39	42	48	52

Single Bead, Slip Joint

Size, Inches, ...	3	3½	4	4½	5	6	7	8	9	10
Standard G, ...	\$0 14	\$0 15	\$0 17	\$0 19	\$0 20	\$0 24	\$0 28	\$0 31	\$0 37	\$0 41
26 G, ...	20	21	23	25	26	30	34	37	43	47
24 G, ...	26	27	29	31	32	36	40	43	49	53

Double Bead, Lap Joint

Size, Inches, ...	3	3½	4	4½	5	6	7	8	9	10
Standard G, ...	\$0 16	\$0 17	\$0 19	\$0 21	\$0 22	\$0 26	\$0 30	\$0 33	\$0 39	\$0 43
26 G, ...	22	23	25	27	28	32	36	39	45	49
24 G, ...	28	29	31	33	34	38	42	45	51	55

Double Bead, Slip Joint

Size, Inches, ...	3	3½	4	4½	5	6	7	8	9	10
Standard G, ...	\$0 17	\$0 18	\$0 20	\$0 22	\$0 23	\$0 27	\$0 31	\$0 34	\$0 40	\$0 44
26 G, ...	23	24	26	28	29	33	37	40	46	50
24 G, ...	29	30	32	34	35	39	43	46	52	56

Cold Rolled Copper in eight foot lengths

Single Bead, Lap Joint

Size, Inches, . . .	3	3½	4	5	6	7	8	9	10
14 oz., ...	\$0 31	\$0 36	\$0 40	\$0 50	\$0 61	\$0 71	\$0 82	\$0 91	\$1 00
16 oz., ...	33	39	44	54	66	77	88	98	1 08
20 oz., ...	41	49	55	67	83	96	1 10	1 22	1 34

Single Bead, Slip Joint

Size, Inches, . . .	3	3½	4	5	6	7	8	9	10
14 oz., ...	\$0 34	\$0 39	\$0 43	\$0 53	\$0 64	\$0 74	\$0 85	\$0 96	\$1 06
16 oz., ...	36	42	47	57	69	80	91	1 03	1 14
20 oz., ...	45	53	59	71	87	1 00	1 14	1 28	1 42

Double Bead, Lap Joint

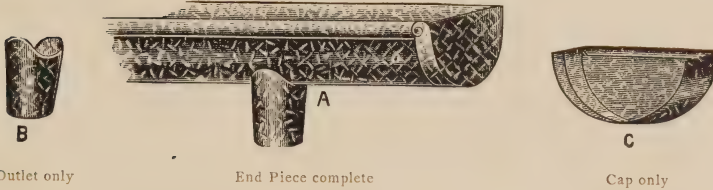
Size, Inches, . . .	3	3½	4	5	6	7	8	9	10
14 oz., ...	\$0 37	\$0 42	\$0 46	\$0 56	\$0 67	\$0 77	\$0 88	\$1 00	\$1 12
16 oz., ...	39	45	50	60	72	83	94	1 07	1 20
20 oz., ...	49	57	63	75	91	1 04	1 18	1 34	1 50

Double Bead, Slip Joint

Size, Inches, . . .	3	3½	4	5	6	7	8	9	10
14 oz., ...	\$0 40	\$0 45	\$0 49	\$0 59	\$0 70	\$0 80	\$0 91	\$1 05	\$1 18
16 oz., ...	42	48	53	63	75	86	97	1 12	1 26
20 oz., ...	53	61	67	79	95	1 08	1 22	1 40	1 58

Gutter End Pieces, Caps and Outlets

Standard Lists, Steel and Charcoal Iron



Size, Inches,	End Pieces Complete							
	3	3½	4	4½	5	6	7	8
Per Dozen, Single Bead, . .	\$2 80	\$2 80	\$3 10	\$3 45	\$3 45	\$4 15	\$4 70	\$5 25
Per Dozen, Double Bead, . .	3 30	3 30	3 60	3 95	3 95	4 65	5 20	5 75
Per Dozen, Caps only, . . .	95	95	1 10	1 20	1 20	1 45	1 70	2 10
Per Dozen, Outlets only, . .	75	80	85	95	95	1 20		

Gutter Mitres

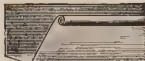
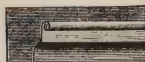


Standard Lists, per Dozen, for both Galvanized Steel and Genuine Charcoal Iron Galvanized Mitres

Inch Size	Slip Joint Single Bead			Lap Joint Single Bead			Slip Joint Double Bead			Lap Joint Double Bead			Inch Size
	Stand- ard	No. 26	No. 24	Stand- ard	No. 26	No. 24	Stand- ard	No. 26	No. 24	Stand- ard	No. 26	No. 24	
3	\$2 75	\$3 60	\$4 50	\$2 25	\$3 00	\$3 75	\$3 25	\$4 20	\$5 20	\$2 75	\$3 60	\$4 50	3
3½	3 00	3 90	4 80	2 50	3 25	4 00	3 50	4 50	5 50	3 00	3 90	4 80	3½
4	3 25	4 25	5 25	2 75	3 60	4 50	3 75	4 90	6 00	3 25	4 25	5 25	4
4½	3 40	4 50	5 60	2 90	3 80	4 80	3 90	5 10	6 30	3 40	4 50	5 60	4½
5	3 50	4 65	5 80	3 00	3 90	4 80	4 00	5 20	6 50	3 50	4 65	5 80	5
6	4 00	5 20	6 50	3 50	4 50	5 50	4 50	5 85	7 25	4 00	5 20	6 50	6
7	4 75	6 25	7 75	4 25	5 75	6 75	5 25	6 75	8 25	4 75	6 25	7 75	7
8	5 50	7 25	9 00	5 00	6 50	8 00	6 00	7 90	10 00	5 50	7 25	9 00	8

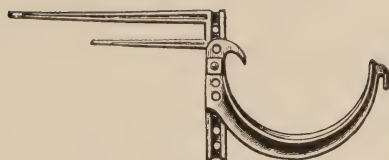
Unless otherwise ordered Half rights and lefts, Half inside and outside slip joints will be shipped.

Galvanized Roof Gutters

				No. 28	No. 26	No. 24	
Style A		14 inch girth, per foot, ...		\$0 35	\$0 41	\$0 59	
		20 " " " "		50	62	74	
		24 " " " "		60	72	84	
Style B		15 inch girth, per foot, ...		\$0 37	\$0 43	\$0 61	
		20 " " " "		50	62	74	
		24 " " " "		60	72	84	
		Girth	Width	Depth	No. 28	No. 26	No. 24
					Per foot	Per foot	Per foot
Style C		12 inch	5 inch	3½ inch	\$0 30	\$0 36	\$0 54
		14 " "	6 " "	4¼ " "	35	41	59
		16 " "	7 " "	4½ " "	40	52	64
Style D		15 inch	6 inch	4 inch	\$0 37	\$0 43	\$0 61
		18 " "	7 " "	5 " "	45	57	69
		20 " "	8 " "	5¾ " "	50	62	74
Style E		15 inch	6 inch	4½ inch	\$0 37	\$0 43	\$0 61
		18 " "	7 " "	5½ " "	45	57	69
		22 " "	8 " "	7 " "	55	67	79
Style F		18 inch	6 inch	5½ inch	\$0 45	\$0 57	\$0 69
		20 " "	7 " "	5¾ " "	50	62	74
		22 " "	8 " "	7 " "	55	67	79
Style G		18 inch	6 inch	5½ inch	\$0 45	\$0 57	\$0 69
		20 " "	7 " "	6½ " "	50	62	74
		22 " "	8 " "	7 " "	55	67	79
Style H		14 inch	6 inch	4 inch	\$0 35	\$0 41	\$0 59
		16 " "	7 " "	4¾ " "	40	52	64
		18 " "	8 " "	5½ " "	45	57	69
Style J		18 inch	6 inch	5¾ inch	\$0 54	\$0 66	\$0 78
		20 " "	7 " "	6½ " "	60	72	84
		24 " "	9 " "	8 " "	72	84	96



No. 7 is made to drive from 3 to 4 inches square in the cornice. The lower prong forms a brace for the upper, and makes it very strong and firm.



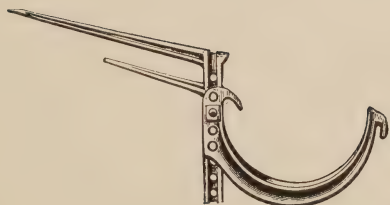
No. 8 is made to drive from 3 to 6 inches square in the cornice.

This iron is intended for eaves where the shingles project far over the cornice.

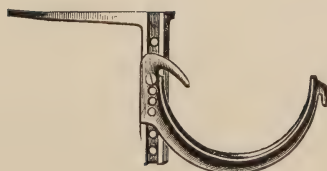


No. 9 is to drive with the pitch of the roof. Same length as No. 7.

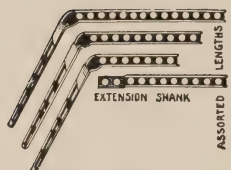
Suited for narrow molded cornice.



No. 13 drives with the pitch of the roof. Same length as No. 8.



No. 14 is made to drive in brick or stone fronts.



No. 11 is nailed to the side of the rafter, assorting the 4, 6 $\frac{1}{2}$ and 9-inch shank to correspond with the fall required.

No. 12 is made for $\frac{1}{4}$ pitch to fasten under the shingles or slate. The holes on top of the shank are made beveling so that the nail can be driven at any point to enter the shank.

Shanks

Assorted lengths

All orders are filled with assorted length shanks unless otherwise ordered.

Gem Circle

Sizes 3, 3 $\frac{1}{2}$, 4, 4 $\frac{1}{2}$, 5, 6, 7, 8 inch.

Penn Circle

Sizes 3 $\frac{1}{2}$, 4, 4 $\frac{1}{2}$, 5, 6, 7, 8 inch.

PRICE LIST OF SHANKS — PER 100

	Plain	Black	Tinned
Nos. 7, 9, ...	\$2	00	\$2 50
Nos. 8, 11, 13, 14, ...	3	00	3 75
No. 12, ...	3	50	4 40
Nos. 11 and 12, all long, add to list, ...	1	00	1 25
Other numbers, all long, add to list, ...	50		65

One Bolt included with each Hinged Shank.

PRICE LIST OF CIRCLES — PER 100

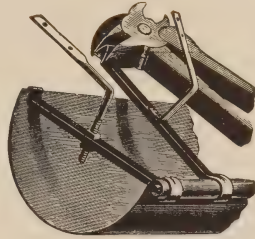
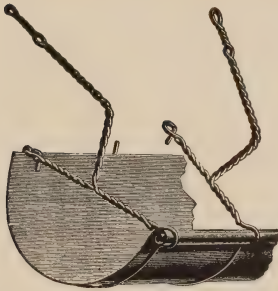
	With Bolts and Straps	Plain	Black	Tinned
3, 3 $\frac{1}{2}$, 4 inches, ...		\$2	00	\$2 50
4 $\frac{1}{2}$, 5 inches, ...		3	00	3 75
6 inches, ...		4	00	5 00
7, 8 inches, ...		5	00	6 25
9, 10 inches, ...		6	00	7 50
12 inches, ...		8	00	10 00

Additional Bolts and Straps are charged extra. *Always* state number of Shank wanted.

Always state kind and size of Circle wanted.

When *tinned* Hangers are wanted do not fail to so specify.

Wire and Steel Hangers



Size	Bead	Wire, Single Bead, Gross	Wire, Double Bead, Gross	Steel, Single Bead, Gross	Steel, Double Bead, Gross	Rods Only	Bars Only, S. B.
3 inch	1/2 inch	\$2 75	\$3 00	\$3 75	\$4 00	\$2 25	\$1 50
3 1/2 "	1/2 "	2 75	3 00	4 00	4 25	2 25	1 75
4 "	1/2 "	2 75	3 00	4 25	4 50	2 25	2 00
4 1/2 "	1/2 "	3 00	3 25	4 35	4 60	2 25	2 10
5 "	1/2 "	3 00	3 25	4 50	4 75	2 25	2 25
6 "	5/8 "	3 50	3 75	5 00	5 25	2 25	2 75
7 "	5/8 "	4 00	4 25	6 00	6 25	2 25	3 75
8 "	5/8 "	4 50	4 75	8 00	8 25	2 25	5 75

Unless otherwise ordered, rods, not bars, are furnished with hangers.

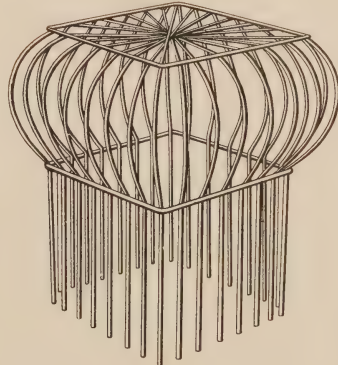
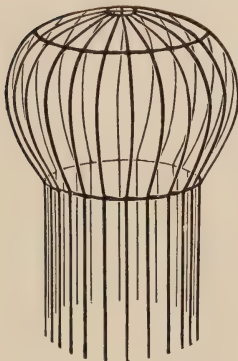
Riveted Strap Hangers, same list as rod and nut.

State size of bead ; measurement taken inside of bead.

Wire Conductor Strainers

Galvanized and copper

Round and square



Round—galvanized

2	in., per doz., .	\$1 50
2 1/2	in., per doz., .	1 75
3	in., per doz., .	2 00
3 1/2	in., per doz., .	2 50
4	in., per doz., .	3 00
5	in., per doz., .	5 00
6	in., per doz., .	6 00

Round—copper

2	in., per doz., .	\$2 20
3	in., per doz., .	3 00
4	in., per doz., .	4 60
5	in., per doz., .	9 60
6	in., per doz., .	11 00

Square—galvanized

2 x 3	in., per doz.,	\$4 25
3 x 4	in., per doz.,	7 25
4 x 5	in., per doz.,	9 00

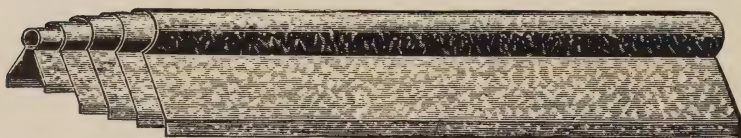
Square—copper

2 x 3	in., per doz.,	\$5 00
3 x 4	in., per doz.,	8 00
4 x 5	in., per doz.,	11 00



Galvanized Iron Ridging

Unless otherwise specified, we always ship 2-inch.



Girth	Roll	Apron	No. 28	No. 26	No. 24
7 inches	1 $\frac{1}{4}$ inches	2 inches	\$0 14	\$0 20	\$0 26
8 "	1 $\frac{1}{2}$ "	2 "	16	22	28
10 "	2 "	2 $\frac{1}{2}$ "	19	25	31
12 "	2 $\frac{1}{2}$ "	3 "	23	29	35
14 "	3 "	3 $\frac{1}{2}$ "	28	34	40

Unless otherwise ordered, 10-inch girth will be shipped.

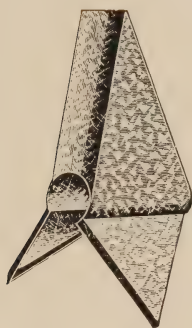
V Angle Ridge Cap

Made of Galvanized Iron. In Three Sizes.



Girth	Apron	No. 28	No. 26	No. 24
6 inches	3 inches	\$0 13	\$0 19	\$0 25
7 "	3 $\frac{1}{2}$ "	14	20	26
8 "	4 "	16	22	28

Galvanized Iron Cresting Blocks



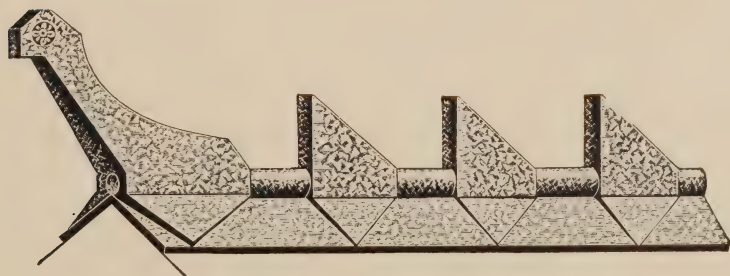
Made of Galvanized Iron to fit two (2) inch Ridge Roll.

Can be adjusted to make various designs.

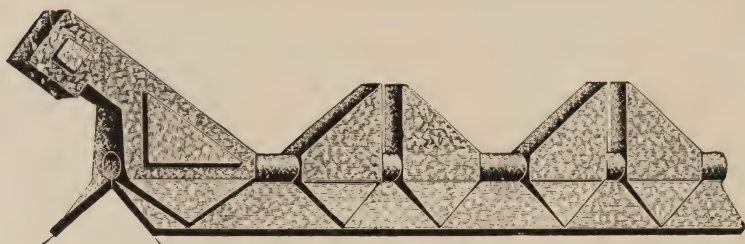
The above cresting block when applied to ridge roll will be found to meet the requirement for a cheap and ornamental ridge cresting. It is applied by slipping the block over roll, spacing as required, and nailed through lower flange of block with wire nail, securing ridge roll in place at same time.

Following cuts show blocks placed on ridging in five different positions, each imparting a different appearance.

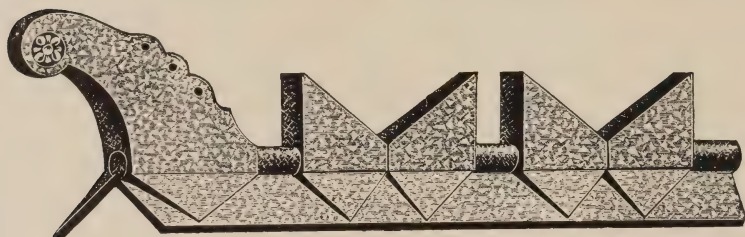
Size of block, 6 inches long by 5 inches high from top of roll.



No 1



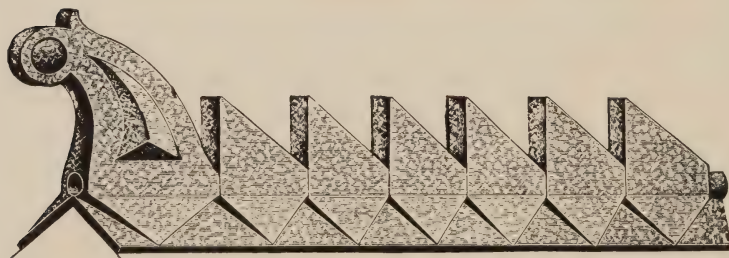
No. 2



No. 3

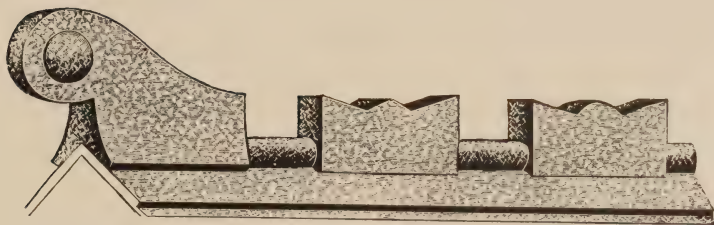


No. 4



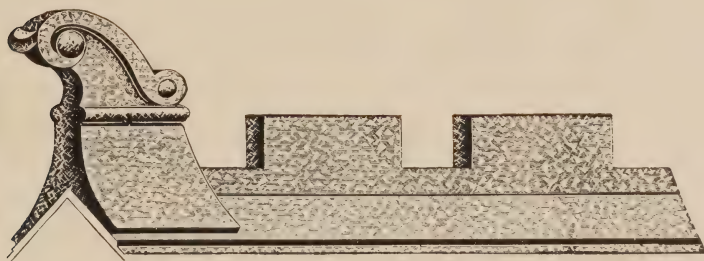
No. 5

Cresting Blocks, per 100, ...	\$30 00
No. 1 Finial, 13 1/2 inches high, each, ...	1 30
Nos. 2 and 3 Finials, 11 inches high, each, ...	1 50
Nos. 4 and 5 Finials, 13 inches high, each, ...	1 80



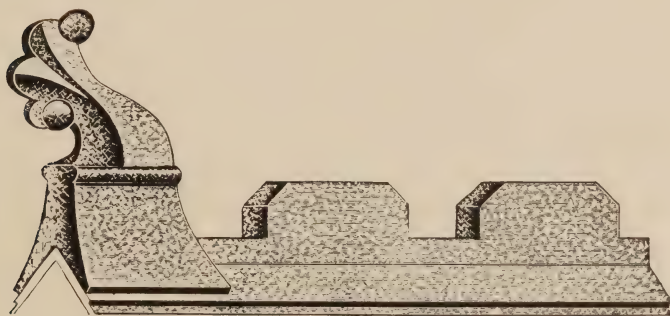
Style D

Cresting—7 inches high, 3-inch Apron, per foot, ... \$0 30
 Finial—10½ inches high, each, ... 1 25



Style E

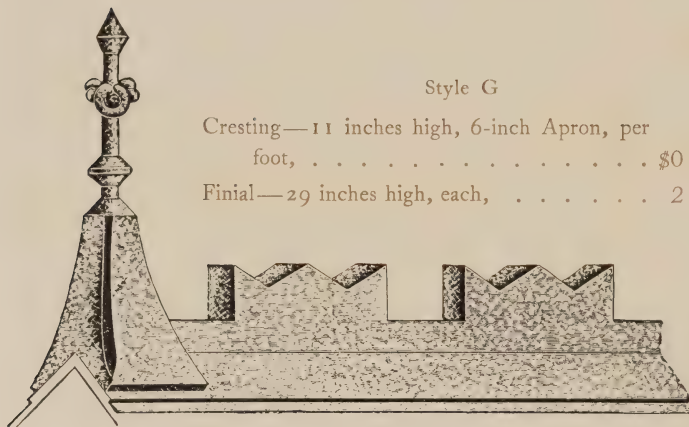
Cresting—11 inches high, 6-inch Apron, per foot, ... \$0 40
 Finial—18 inches high, each, ... 2 00



Style F

Cresting—11 inches high, 6-inch Apron, per foot, ... \$0 44
 Finial—22 inches high, each, ... 2 00

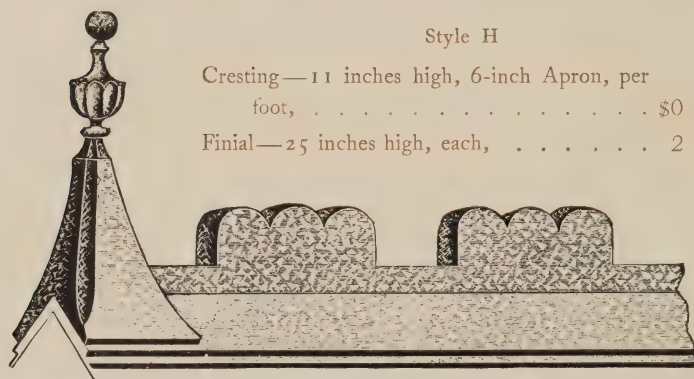
When ordering, state pitch of roof.



Style G

Cresting—11 inches high, 6-inch Apron, per
foot, ... \$0 46

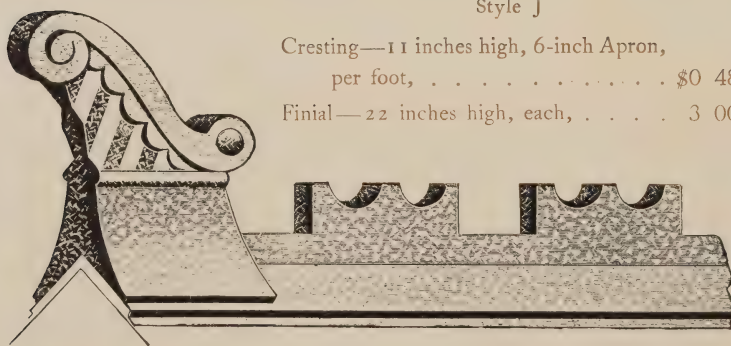
Finial—29 inches high, each, ... 2 25



Style H

Cresting—11 inches high, 6-inch Apron, per
foot, ... \$0 48

Finial—25 inches high, each, ... 2 40



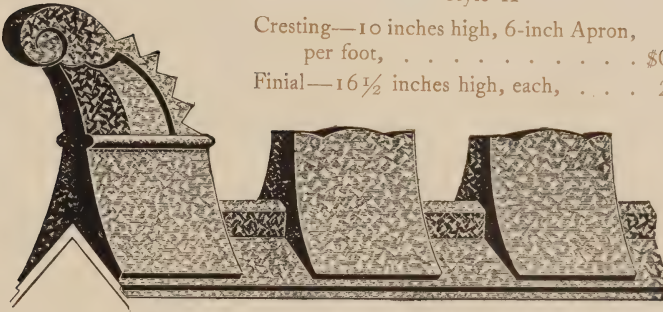
Style J

Cresting—11 inches high, 6-inch Apron,
per foot, ... \$0 48

Finial—22 inches high, each, ... 3 00

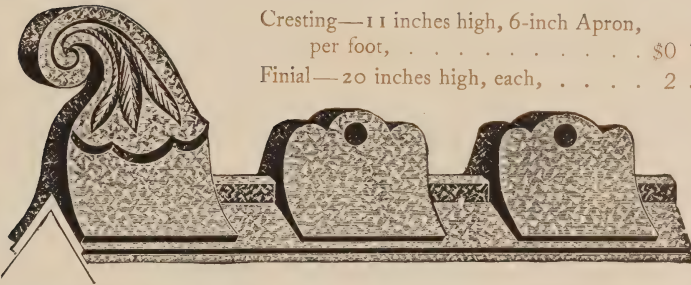
Style K

Cresting—10 inches high, 6-inch Apron,
per foot, ... \$0 60
Finial—16½ inches high, each, ... 2 00



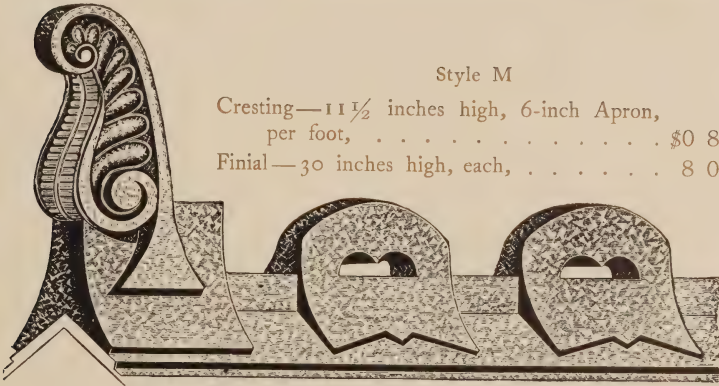
Style L

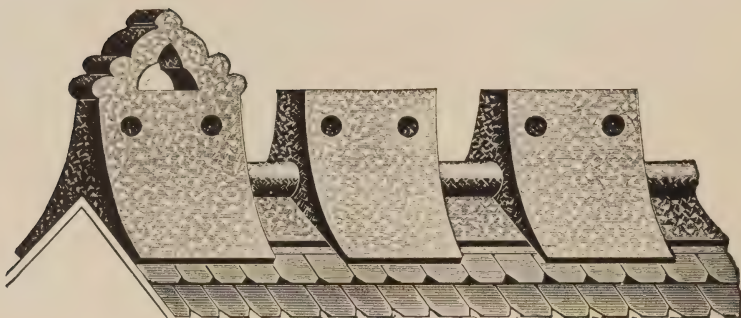
Cresting—11 inches high, 6-inch Apron,
per foot, ... \$0 70
Finial—20 inches high, each, ... 2 50



Style M

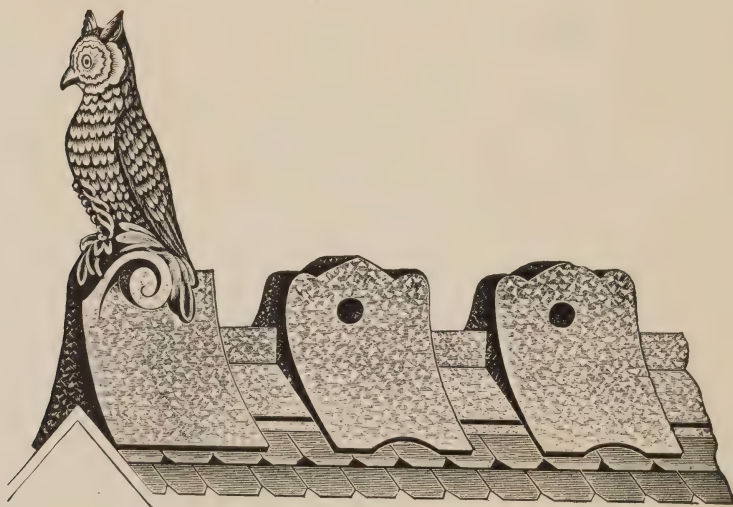
Cresting—11½ inches high, 6-inch Apron,
per foot, ... \$0 80
Finial—30 inches high, each, ... 8 00





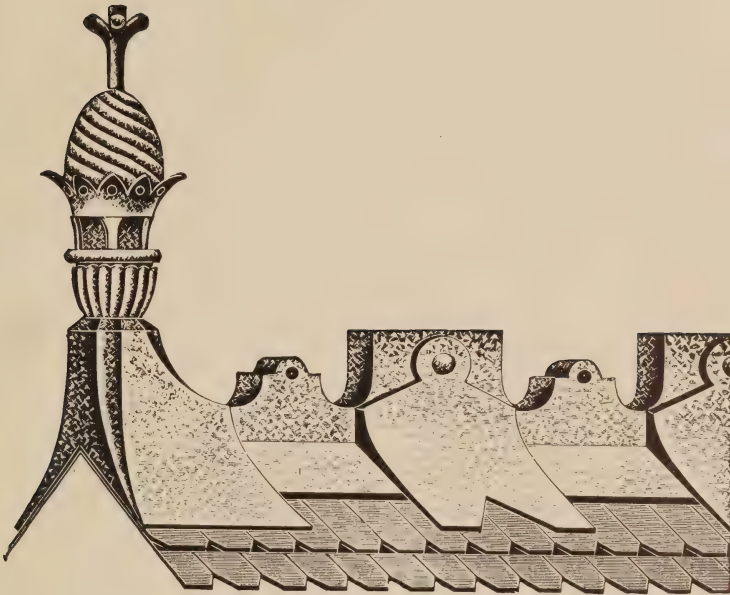
Style N

Cresting—Height, 12 inches. Width of Apron, 6 inches. Per foot, \$0 90
 Finial—20 inches high, each, ... 3 00



Style O

Cresting—Height, 12 inches. Width of Apron, 6 inches. Per foot, \$1 00
 Finial—35 inches high, each, ... 16 00



Style P

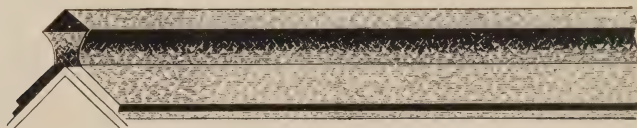
Cresting--Height, 12 inches. Width of Apron, 5 inches. Per foot, \$1 20
 Finial--35 inches high, each, ... 10 00

Ornamental Ridgings



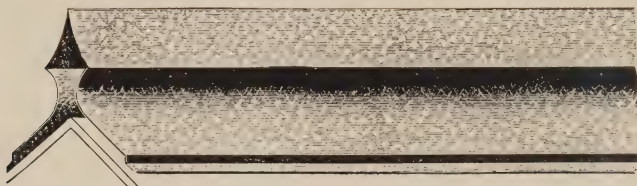
No. 117

Height, ...	4 $\frac{3}{4}$ inches	6 inches	8 inches
Girt, ...	12 "	15 "	20 "
Apron, ...	2 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "
Price, ...	\$0 15 per foot	\$0 19 per foot	\$0 25 per foot



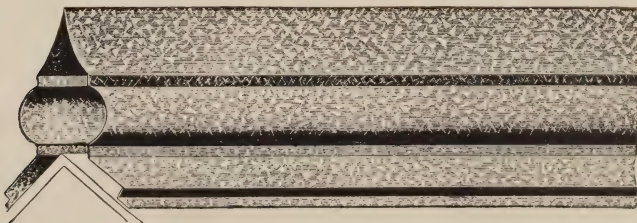
No. 118

Height, ...	4 $\frac{1}{2}$ inches	6 inches	8 inches
Girt, ...	12 "	15 "	20 "
Apron, ...	2 $\frac{1}{2}$ "	3 "	4 $\frac{1}{2}$ "
Price, ...	\$0 15 per foot	\$0 19 per foot	\$0 25 per foot



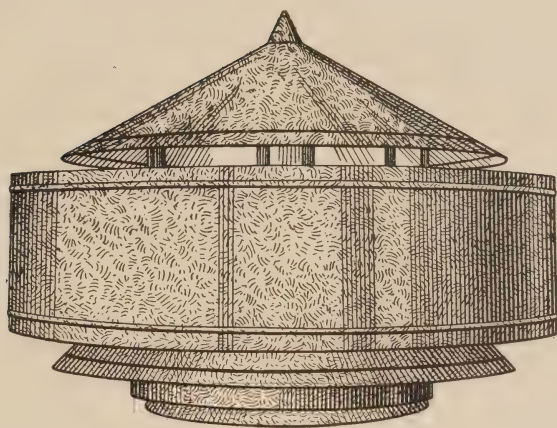
No. 119

Height, ...	6 $\frac{1}{4}$ inches	8 inches	10 inches
Girt, ...	15 "	20 "	24 "
Apron, ...	3 "	4 "	4 $\frac{1}{2}$ "
Price, ...	\$0 19 per foot	\$0 25 per foot	\$0 30 per foot



No. 120

Height, ...	8 inches	9 $\frac{1}{2}$ inches	12 inches
Girt, ...	20 "	24 "	30 "
Apron, ...	4 $\frac{1}{2}$ "	5 "	6 $\frac{1}{2}$ "
Price, ...	\$0 26 per foot	\$0 31 per foot	\$0 38 $\frac{1}{2}$ per foot



The Lupton Ventilator is designed upon right principles. It is simple and uncomplicated, therefore it does the work without requiring any attention. Lupton Ventilators answer requirements of all classes of buildings.

Made in galvanized iron, copper, copper-coated steel and aluminum-coated steel.

LIST PRICE, GALVANIZED IRON

Inches	2	2½	3	3½	4	4½	5	5½
Price	\$1.00	\$1.00	\$1.50	\$1.50	\$1.75	\$2.00	\$2.50	\$2.85
Inches	6	7	8	9	10	12	14	
Price	\$3.40	\$4.00	\$4.65	\$5.20	\$5.75	\$6.75	\$13.00	
Inches	16	18	20	24	30	36	40	
Price	\$20.00	\$27.00	\$33.00	\$40.00	\$65.00	\$120.00	\$180.00	

Corrugated Sheet Iron and Steel

Painted or Galvanized



Corrugations $2\frac{1}{2}$ inches from center to center, and $\frac{5}{8}$ of an inch deep.

Made in 5 to 12-foot lengths, and 16 to 28 gauge, for roofing, siding, partitions, awnings, etc.

In ordering, always state whether painted or galvanized is wanted.

The Lupton Roofing

In connection with skylight, cornice work and architectural sheet-metal work in general, we are large contractors for roofing in tin, tile, slate and slag.

David Lupton's Sons Company

New York

Philadelphia

Detroit

Table of Contents

	PAGE
FIRE-PROOF WINDOWS, ...	2-57
Standard types, ...	7, 27, 28-39
Measuring instructions, ...	41-45
Mullioned windows, ...	46-47
Installations, ...	24, 48-57
Awards, ...	2, 6, 26
Automatic closing, ...	21
Underwriters' tests, ...	3-5
ARCHITECTURAL SHEET-METAL WORK, ...	59-109
Cornices, ...	63-78
Pediments, ...	79
Cornice signs, ...	83
Bay windows, ...	85
Oriel windows, ...	87
Dormer windows, ...	89-93
Window and door heads, ...	94-95
Conductor heads, ...	96-101
Crosses, ...	102-103
Finials, ...	104-108
SKYLIGHTS, ...	111-131
Skylights, ...	111-126
Skylight gearing, ...	127-131
EAVES-TROUGH AND CONDUCTOR PIPE WITH FIXTURES AND TRIMMINGS, ...	135-152
Conductor pipe, ...	135-139
Elbows and shoes, ...	141-143
Hooks, ...	144
Eaves-trough, ...	146
Gutter end-pieces and mitres, ...	147
Roof gutters, ...	148
Eaves-trough hangers, ...	149-150
Hangers, ...	151
Ridgings, ...	152
CRESTING BLOCKS, ...	153-159
ORNAMENTAL RIDGINGS, ...	160
CORRUGATED SHEET-IRON AND STEEL, ...	162
ROOFING, ...	163
VENTILATORS, ...	161

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